11 April 2022



Department for Energy and Mining

Richard Hill Senior Exploration Geologist Copper Search Australia Pty Ltd 21 Sydneham Road NORWOOD SA 5067 rhill@coppersearch.com.au

Dear Mr Hill,

# Approval Notification - Exploration Program for Environment Protection and Rehabilitation (EPEPR 2023-003) EL 6181, 6195, 6238, 6314, 6315, 6899

The program for EL 6181, 6195, 6238, 6314, 6315 and 6899, final version submitted on 22 March 2023 to conduct exploration drilling, has been approved in accordance with Section 70B(5) of the *Mining Act, 1971 (the Act)*.

In accordance with section 70B(7a)(b) of the Act, the approved program is subject to the conditions listed in the attached notice.

You are reminded that:

- 1. You must at all times implement and comply with the approved EPEPR.
- 2. The approved EPEPR will be made publicly available on the Mining Register.
- 3. Exploration operations on "native title land" (as defined in the *Native Title (South Australia) Act, 1994)* must be conducted in accordance with Part 9B of the Act.
- 4. In accordance with Section 70C of the Act, the licensee must review the EPEPR on request of the Minister's Delegate within a time specified in the request and submit the revised EPEPR for approval.
- 5. As the operator for the approved EPEPR you must take all reasonable and practical measures to avoid undue damage to the environment and meet all the approved outcomes (when measured against the approved criteria) listed within the EPEPR.
- 6. In accordance with regulation 78 of the *Mining Regulations 2020* and Terms of Reference 012 (TOR 012), the licensee must submit an Exploration Compliance Report to the Mineral Exploration Branch each year, within 60 days after the anniversary of the date the licence was granted, and 60 days after the expiry or surrender of the EL, or in accordance with joint reporting requirements agreed to with the Minister.
- 7. In accordance with regulation 16(4) of the *Mining Regulations 2020*, drillhole and geological samples must be kept in accordance with guidelines issued by the Department for the term of the relevant tenement and for 7 years after the expiry, surrender, cancellation or forfeiture of the tenement to which the sample relates. Furthermore, samples must be retained by the tenement holder, or provided to the Director, in accordance with those guidelines (unless the Minister has authorised, on application by



the tenement holder in a manner and form set out in the guidelines, the destruction or disposal of the samples).

8. The EPEPR is approved for the term of Exploration Licence(s): [6181, 6195, 6238, 6314, 6315 and 6899]

This approval does not constitute endorsement of the systems that you have in place to manage your exploration operations in compliance with the Act and licence conditions. In granting the approval, the EPEPR and your capacity to undertake the proposed activities have been considered. However, responsibility for compliance with the Act and the licence conditions, remains at all times with the licensee.

This approval relates only to the requirements of the Act. Other legislation relevant to this application includes the *South Australian Work Health and Safety Act, 2012* and Regulations. For example, Chapter 10 of the *Work Health and Safety Regulations, 2012 (SA)* introduced new requirements for mine operators in South Australia. The new requirements include a notification for mining operations and the establishment of a Safety Management System. For further information on your responsibilities, including a guide to Chapter 10 and the Mine Operator Notification Form, contact SafeWork SA on 08 8303 0255 or via its website at <a href="http://www.safework.sa.gov.au">www.safework.sa.gov.au</a>.

The proposed program may be subject to the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Mineral exploration industry-specific information is contained in an appendix in the EPBC Matters of National Environmental Significance – Significant impact guidelines 1.1. This document is available on the Australian Government's Department for Agriculture, Water and the Environment website at <u>http://www.environment.gov.au/resource/significant-impact-guidelines-11-matters-nationalenvironmental-significance</u>. For further information, contact the Department for Agriculture, Water and the Environment, or visit its website at <u>www.environment.gov.au/.</u>

Proposed changes to exploration operations stated in the approved EPEPR may require a *PEPR review* to be submitted for assessment. Where a *PEPR review* is required, implementation of the operational changes can only occur after the revised EPEPR is approved. Further information on when an exploration PEPR review is required can be found in Departmental guideline <u>MG22 Conducting mineral exploration</u>.

If you require any further information, please contact Simon Constable on 8429 2516 or email <u>DEM.exploration@sa.gov.au</u>.

Yours sincerely

Benjamin Zammit DIRECTOR MINERAL EXPLORATION MINERAL RESOURCES In accordance with delegated Ministerial powers and functions

CC: DEW Hydrogeologist miningwatersciencereferrals@sa.gov.au

The Department's Regulatory Guidelines, Ministerial Determinations and Information Sheets are available at: <u>http://energymining.sa.gov.au/minerals/knowledge\_centre</u>

 MINERAL EXPLORATION

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## Notice of Approval Conditions - EPEPR2023-003

In accordance with section 70B(7a)(b) of the Act, the approved program is subject to the following conditions:

1. Prior to conducting exploration operations, a Program Notification must be submitted to the Department for Energy and Mining in accordance with the approved PEPR, 21 days prior to commencement of operations. Forward all Program Notifications to Mineral Exploration Branch – Attn: Exploration Regulation, email: <u>DEM.exploration@sa.gov.au</u>



## APPLICATION

Mining Act 1971 and Mining Regulations 2020



**Government of South Australia** 

**EXPLORATION PROGRAM FOR ENVIRONMENT PROTECTION AND REHABILITATION (PEPR)** 

USE THIS TEMPLATE TO:

Apply to conduct mineral exploration operations not covered by the Generic PEPR (Adopted Program) for an ongoing period on one or more exploration licences (ELs), retention leases (RLs) or mineral claims (MCs) in South Australia.

Refer to the Exploration PEPR Terms of Reference and to Minerals Regulatory Guidelines MG22 when completing this application. Further information on exploration requirements in South Australia is available on the Department for Energy and Mining (DEM) Minerals website www.energymining.sa.gov.au .

#### SECTION A – GENERAL DETAILS

Operational approval period	Ongoing approval period. A program notification is required to be provided to DEM 21 days prior to the start date of each new program of works (PEPR program notification template is available from the DEM Minerals website). All rehabilitation is to be completed within 3 months after the expiry of each program notification.			
Tenement details	EL6181, 6195, 6238, 6314, 6315,ELA 2022-086 (pending)			
Tenement holder(s) (for each tenement)	Copper Search Australia P.L.(a 100% owned subsidiary of Copper Search Limited).			
Operating company	Copper Search Limited (ASX-Listed public company)			
Agency agreement (if applicable)	NA			
PEPR prepared by	Richard Hill, Senior Exploration Geologist, Copper Search Limited			
Project supervisor/contact person(s)	Richard Hill, Senior Exploration Geologist, Copper Search Limited, rhill@coppersearch.com.au, Ph 0408 895192 B.Sc. (Hons) Geology and Biology, 27 years' experience in greenfields and brownfields mineral exploration, mostly in South Australia			
Project/prospect name	Southern Peake Project			
Location details	To the north, east and southeast of William Creek, S.A. approximately 200km east of Coober Pedy			
Project description, commodity type and mineralisation model	The Company is applying a broad ranging I(O,S)CG model to this area, which considers the Southern Peake Project's location on the Gawler Craton as well as its apparent geological similarities to the Eastern Succession of the Mt Isa Inlier. Copper Search Limited has, over the last four months, conducted a complete review of its Peake-Denison tenements, effectively dismissing the Archimedes Consulting targeting and the PTP airborne survey. The company has already completed one deep diamond drillhole under the approved PEPR2021-019.The company is seeking approval for an on-going PEPR over these five Exploration Licences and one Ela (grant pending) for deep diamond drilling. The locations of these diamond holes are yet to be finalised, as data processing and interpretation is on-going. A detailed gravity survey was completed in mid-December over some of the initial drill targets, and may lead to modifications of the location of the drill holes. During the four months prior to the submission of this document, Copper Search has undertaken a complete review of the region, specifically with the aim of exploring for Iron Oxide Copper-Gold deposits a.k.a. IOCGs, which are likely Cloncurry – magnetite dominant style. Additionally, the Company is seeking to identify (ISCG) Iron Sulphide Copper Gold deposits. Lithostratigraphic interpretation of all available data and inversion modelling of the GCAS magnetic and gravity data			

undertaken and has generated in excess of 30 targets. A process of elimination of targets through a number of factors, including modelled depth, magnetic intensity, gravitational anomalism, proximity and overlap of mag and gravity anomalies, proximity to potential fluid sources and fluid conduits, has allowed a form of ranking of targets.

The initial program will be four to six diamond holes with interpreted depth range from 300m to 800m vertical. Subsequent drilling will be dependent on the success of the first phase of drilling.

#### DECLARATION

I, the tenement holder, declare under regulation 84 of the Mining Regulations 2020, that I have taken reasonable steps to review the information in this PEPR/revised PEPR to ensure its accuracy.

Name	Richard Hill	
Position	Senior Exploration Geologist, Copper Search Limited	

Signature (digital allowed)	AN FUD .
Date	22/12/2022

Copy and paste the above table if there are more than 1 tenement holder.

Note: An authorised representative from each tenement holder must sign the declaration (e.g., in accordance with the Corporations Act 2001).

#### SECTION B - PROGRAM PREPARATION AND ACCESS TO LAND

#### Work undertaken in preparing the proposal

Summarise the research and fieldwork undertaken in preparing the proposal including:

- desktop reviews of existing information
- field visits for reconnaissance
- contractor consultation (i.e., equipment scale, type)
- other information used when planning the proposed program.

Copper Search Australia PL has completed a significant amount of work in preparing for this exploration program, including

- 1) Modelling of the regional geophysics (GCAS Magnetic survey, available gravity data, seismic data and geological data including drill logs), resulting in the definition of 12 drill targets.
- 2) Reconnaissance of the tenement and meetings with the landholder, plus determining the landforms near each of the targets.
- 3) Signing of an NTMA with the Arabana people.
- 4) Contracting SA-based MJ Drilling Services for an extended program in the area.
- 5) The completion of one drillhole on the Douglas Creek Prospect, an ADI-supported drillhole, ACDDH01
- 6) Completion of a major gravity survey across much of EL6195 and 6315, and infill (detailed) gravity surveys over parts of EL6181, 6238 and 6314
- 7) Development of a Lithostratigraphic model of the region, incorporating drillhole data, magnetic and gravity data, solid geological data,
- 8) Modelling the gravity and GCAS Aeromagnetic data using a conventional approach to develop a series of over 30 targets for detailed consideration across all of the Company's tenements in the Peake and Denison domain. This includes 12 targets under review in the Southern Peake Project.
- 9) Trialling of an IP survey and infill gravity over specific targets
- 10) Conducting multiple Heritage Clearance Surveys over all sites across the five exploration licences under consideration

### Consultation (r. 64)

Using the table below, provide a summary of the individual or group of similarly affected persons and summarise the results of consultation that has been undertaken on the proposed operation. Types of interested or affected parties include residents, council, government agencies etc (exclude native title groups and defence owned or controlled lands – refer to relevant sections below).

Tenement	Stakeholder	Land tenure	Land use	Date and type of NOE served	Type of exempt land	Date waiver obtained	Date consultation/access agreement and/or permits signed/authorised	Stakeholder concerns raised and how addressed
EL6181, 6195, 6314, 6315, 6238 Ela2022- 086	Williams Cattle Company (Anna Creek Station)	Pastoral Lease	Grazing cattle/Pastoral	March 2021, reissued 30 <sup>th</sup> September 2022	NA	NA	03/11/2021	On-going communications on a weekly basis, regarding all aspects of the exploration program. Access agreements in place and includes daily access payments, repair of roads, grading of roads, agreement to repair any damaged infrastructure, agreement to suspend/modify activities to not interfere with pastoralist's business (e.g., avoid disturbing stock during mustering etc)
EL6181	Saltbush Ag (Stuart Creek Station	Pastoral Lease	Grazing cattle/Pastoral	30 <sup>th</sup> September 2022	NA	NA	30/09/2022	Text and emails regarding activities and timing of mustering in the far northern part of Stuart Creek. Adam Willis (Manager) has been helpful and positive, especially when advising about access routes to the tenement area.
EL6195, 6314, 6315	William Creek Hotel, Wright Air Services	Freehold	tourism	NA	NA	NA		On-going consultation, when required, with Trevor Wright regarding provision of air services, accommodation, logistics, supplies, potable water, waste disposal etc. No concerns expressed. Note that the William Creek village and associated freehold lands are all outside of the exploration licences, however William Creek is an important part of the exploration program, in terms of logistics and supply of potable water and fuel.

If any individual or group of similar affected persons were not able to be consulted, what steps were taken to consult with them?

Provide any additional relevant information.

<Include text here.>

#### SECTION C - DESCRIPTION OF THE ENVIRONMENT

Include a description of the features of the environment that are expected to be affected by the proposed operations. Each of the elements of the existing environment listed below must be described only to the extent that they may need to be considered in assessing the impacts that the proposed exploration operations are reasonably expected to have on the environment. If the element is not likely to be impacted by the operation, a statement to that effect must be included.

Where the terms and conditions of an RL include environmental outcomes, include any new baseline environmental data relevant to the control strategies or measurement criteria, and where changes to the environment are identified, provide an updated description of the environment to describe the changes.

#### Proximity to infrastructure and housing

Provide the following information:

- Settlements indicate the name and distance of the nearest town, and residences within, or near the proposed exploration
  operations.
- Roads and tracks indicate existing fence lines, roads and tracks, including those which are to be used in the exploration program.
- Other human infrastructure such as schools, hospitals, commercial or industrial sites, roads, sheds, bores, dams, ruins, pumps, scenic lookouts.
- Railway lines, transmission lines, gas and water pipelines, communication lines e.g., fibre optic cables etc., if these may be impacted by the exploration operations.

Provide this information on a locality plan/map.

Infrastructure consists of station tracks, bores and associated stock troughs and pipework, fences, turkey-nest dams and stockyards. The only public-access road is the Oodnadatta track in the SW corner of EL6195 and the track from the Oodnadatta Track to Lake Eyre South, Halligan's Bay area. The village of William Creek is immediately south of EL6195. For details, please refer to the attached maps.

#### Land use and tenure

Using the table below, select the land tenure and land use that the proposed exploration activities will occur in. Include additional information where prompted.

Land tenure/type	Applicable	Land use	Applicable
Freehold		Grazing	$\boxtimes$
Pastoral lease	$\square$	Cultivated land	
Perpetual lease		Residential	
Crown land		Township	
Mining reserve		Industrial	
Aboriginal freehold/leasehold land (e.g., A <u>n</u> angu		Tourism	
Pitjantjatjara Yankunytjatjara and Maralinga Tjarutja lands)		Conservation	
Forestry reserve		Defence activity	
Marine parks		Road reserve	
National parks, conservation parks, conservation reserves, regional reserves*		Sites of scientific significance (geological monuments, fossil reserves etc.)	
Adelaide Dolphin Sanctuary		Orchard/vineyard	
Murray Darling Basin		*Native vegetation heritage agreements	
<if is="" name="" of="" p<="" park="" please="" provide="" reserve="" selected,="" td="" the=""><td>oark&gt;</td><td><provide area="" name="" of="" the=""></provide></td><td></td></if>	oark>	<provide area="" name="" of="" the=""></provide>	
Other*		*European heritage sites	
<if describe="" here.="" is="" land="" other="" selected,="" tenure="" the=""></if>		<provide name="" of="" site="" the=""></provide>	
		*Other (e.g., historic mining)	
		<provide name="" of="" site="" the=""></provide>	
Oppoing exploration PEPR template – January 2021			Page 5 of 48

\* Indicates more information required in field immediately below.

Describe any council policies (or out of council) or development plans that may impact the program area.

Out of council districts, no plans for development

Provide a description of any known plans for future land use changes by other parties.

No land use changes planned

Provide any additional relevant information.

The project area is in what is considered to be a remote area. It is also adjacent to a popular tourist route, the Oodnadatta Track, and includes the popular public access track to the edge of Lake Eyre at Halligan's Bay. As such, any mineral exploration in the region could be considered to be under public scrutiny. However the locations of all of the drill targets are well away from these public access routes. Access to the project areas would include some usage of the Oodnadatta Track and the Halligan's Bay road.

#### Woomera Prohibited Area (WPA)

Will activities be conducted within the WPA	Yes 🗌	No 🖂	Do you have a resource exploration permit in place?	Yes 🗌	No 🗆
In which zone will activities be conducted?					
Does the Exploration Permit allow the operato	or to cond	uct explor	ation operations in the WPA?	Yes 🗌	No 🗆
What is the expiry date of the resource exploration permit?					
Identify closure periods that may impact on the exploration program.					
<include here.="" text=""></include>					

#### Other land owned or controlled by the Commonwealth Department of Defence

Lands in South Australia that are owned or controlled by the Commonwealth Department of Defence, which they manage either as a training or test area, include the Port Wakefield Proof and Experimental Establishment, Murray Bridge Training Area, and Cultana Training Area.

These lands remain to be mineral land under the Mining Act 1971 (SA) and can be accessed for mineral exploration and mining subject to certain restrictions and conditions under the Defence Act 1903 (Cth) and the Defence Regulation 2016 (Cth).

Will operations be conducted within the Port Wakefield Proof and Experimental Establishment, Murray Bridge Training Area, or Cultana Training Area?	Yes 🗌	No 🛛
<if area.="" indicate="" which="" yes,=""></if>		
Do you have a Deed of Access with Defence?	Yes 🗌	No 🗆
What is the expiry date of the Deed of Access?		
Provide the date the Range Control Officer granted access permission to conduct the proposed exploration operations.		
Describe the results of consultation and how any concerns raised were addressed.		
<include here.="" text=""></include>		

#### Native title

Using the table below, describe how you have complied with the requirements of Part 9B of the Mining Act for each tenement (for further information refer to Minerals Regulatory Guidelines MG22).

		Native title				
s the proposed area of exploration located on native title land?	Yes $oxtimes$ No $\Box$ (If no, no further information in this section required.)					
Are there registered native itle party/parties in the area Yes ⊠ No □ of proposed exploration?	Arabana	If no, an Environment, Resources and Development (ERD) Court determination is required.				

Have you negotiated a native title mining agreement?	Yes 🛛 No 🗌	Is the agreement registered? * Yes $\boxtimes$ No $\Box$	6181, 6195, 6235, 6236, 6238, 6314, 6315, 6236, 6808, 6862
Have you accepted an Indigenous land use agreement (ILUA)?	Yes 🗌 No 🛛	Is the ILUA registered? * Yes □ No □	<list by="" covered="" ilua="" tenements="" the=""></list>
Have you obtained ERD Court determination? <sup>†</sup>	Yes 🗌 No 🛛	Is the determination registered? * Yes □ No □	<list by="" covered="" determination="" tenements="" the=""></list>

\* The registration date refers to the date the agreement, determination or ILUA was registered with DEM.

† An ERD Court determination cannot be conjunctive (i.e., cannot apply to subsequent licences).

#### Provide any additional relevant information.

NTMA negotiated for access and use of land for mineral exploration including exploration drilling. NTMA agreement with Arabana People signed and registered with DEM in January 2020

An Heritage Clearance Survey conducted June 2021 over Douglas Creek Target within EL6195. A second survey was conducted in late May-early June, 2022 over a number of targets in Els 6195 and 6315. A third survey was completed in November 2022 over targets in ELs 6181, 6195, 6238 6314 and 6315.

Through these activities, Copper Search has build a high level of mutual cooperation and trust with the Arabana people, and intends to maintain the relationship and work with the Arabana.

#### Landform and topography

Describe the topography of the general area affected by the exploration program. Include the susceptibility to erosion and visual attributes (steep or undulating slopes, plains, rocky outcrops, dunes, saltpans, claypans etc.).

The area is generally low relief and gently undulating desert plain incised by small ephemeral drainage lines that drain into Douglas Creek, which ultimately drains into Lake Eyre. In some areas there are longitudinal dunes to 10m high, with wide interdunal corridors consisting of bare claypans or sandsheets with generally sparse vegetation. Large areas of the region are vegetated with ephemeral plants and appear to be bare soil for much of the year. There are some areas of salt-lakes and claypans, and minor low plateau areas with small break-aways. Vegetation is generally stunted due to low rainfall and grazing pressures of cattle. In many areas the soil is loosely bound and susceptible to erosion by wind, as stock have trampled and broken the cryptogam-bound crust.

Two broad regions are described

IBRA Region 7.0 (Photo 8) Region: Stony Plains (STP) Landscape: Plateau Details

Details

- Region-Stony Plains
- Region Code STP
- Region No 72
- Landtype Erosional
- Landscape Plateau
- Landform Silcrete capped low tablelands and plains
- Geology Nodular, prismatic silcretes; ferricrete, calcrete, commercial quality opal; gilgai; desert armour; hardpans, deep weathering profiles, ferruginized & calcreted scarp exposures with pallid zones & duricrusts, porcellanitic cemented sediments. Evaporites
- Soil Loamy soils with weak pedologic development, Crusty loamy soils with red clayey subsoils, Cracking clays, Brown calcareous earths
- Vegetation Chenopod Shrub, Samphire Shrub and Forbland
- Climate G: Desert, supporting very little plant growth due to water limitation

## IBRA Region 7.0 (Photo 7)

**Region**: Simpson Strzelecki Dunefields (SSD)

Landscape: Dunefield

## Details

- Region- Simpson Strzelecki Dunefields
- Region Code SSD
- Region No 71
- Landtype Erosional, Depositional or Volcanic
- Landscape Dunefield
- Landform Aeolian dunefield (NNW trending seif dunes), with numerous claypans
- Geology Aeolian sand, fine lacustrine & alluvial deposits. Probably overlies duricrusts & weathered rock similar to that found in the Haddon unit
- Soil Siliceous sands, gray cracking clays
- Vegetation Hummock Grassland
- Climate G: Desert, supporting very little plant growth due to water limitation

•

See the map (attached) for locations of these regions across the project area

#### Soil and surface cover

Describe soil types and soil surface cover - e.g., gibber, rocky - in the general area affected by the exploration program. Include details on the susceptibility to compaction, erosion, dust, runoff and any other soil characteristics – e.g., acid sulphate – that may require control strategies to reduce environmental impacts during operations or rehabilitation.

The area is covered by clays, sands and silts with a surface lag of ferricrete nodules and quartzite gibbers, with sparse to very sparse scrubby vegetation. There are some areas of longitudinal sand dunes with wide clayey interdunes.

The surface geology is a weathering surface that has developed over the Cretaceous Bulldog Shale. There are occasional patches of kopi, associated with wind-blown gypsum accumulation, and some areas of silt and gypsum leftover from Tertiary lakebed sediments and evaporites.

In all likelihood, access tracks will become rutted and in places devolve into bulldust patches. This is unavoidable due to the nature of the loose and fine, clayey soils. Where bulldust develops, all vehicles will continue to drive through the bulldust, rather than driving around it, thus reducing the blow-out effect and the potential for larger-scale erosion and dust.

Access to sites in sand dune areas will be as far as possible via the interdunal areas, crossing of sand dunes will be avoided unless there is no reasonable alternative. Imagery such as Google Earth and the SARIG website imagery will be used to determine access around dunes. This will avoid the potential for long-term damage to the dunes. Erosion of tracks during flooding events cannot be prevented, however remedial action will be taken as soon as possible to restore the track and landscape to best as practical.

#### Surface water

Will the proposed program interfere with surface water bodies and natural drainage (e.g., drainage lines, creeks, floodplains, wetlands)?					
If yes, describe the potential interference and surface water bodies and natural drainage on maps. If no, indicate why.					
The project area is arid lands. Creeks and rivers flow briefly after heavy rains, but for most of the time they are completely dry except a few waterholes along the major creeks (for example along the Douglas Creek). As can be seen from the attached maps, the only major creek to pass through any of the exploration licence areas is Douglas Creek. This creek features prominently within the mythology of the Arabana People, and out of respect for their wishes, there will be no exploration activities within 200m of the creek. Minor tributaries are also important, and through the heritage surveys crossing points of these smaller creeks have been defined.					
Is the program area located within water protection areas defined under the <i>River Murray Act 2003</i> ? If yes, provide the name(s).	Yes 🗌	No 🖂			
<if name(s)="" provide="" the="" yes,=""></if>					
Is the program area located within any prescribed watercourses or prescribed surface water areas under the <i>Landscape South Australia Act 2019</i> ? If yes, provide the name(s).	Yes 🗌	No 🖂			
<if name(s)="" provide="" the="" yes,=""></if>					
Groundwater					

Is groundwater likely to be intersected when conducting the exploration program?	Yes 🛛	No 🗆
If yes, use the table below to describe the expected groundwater (hydrogeological) conditions, and identify groundwater		
aquifers in the exploration area(s) that may be affected. Indicate the approximate depth of drillholes in each area. Copy and naste a new table for each area where different groundwater conditions are expected.		
paste a new table for each area where different groundwater conditions are expected.		
If no, provide evidence or any supporting information demonstrating this.		

#### Description of the locality/area where different groundwater conditions may be encountered

This area is largely underlain by the Great Artesian Basin. It is expected that all drillholes in this area will encounter aquifers of the GAB, specifically the Cadna-Owie formation. This lies beneath the Bulldog Shale, an aquiclude.

Formation age and/or stratigraphic unit	Stratigraphic intervals (depth range) (m)	Aquifer formation name	Aquifer interval/thickness (From–to) (m)	Type of aquifer(s) intersected (e.g., unconfined, confined, artesian)	Provide aquifer salinity, depth to water level and any other relevant comments
Cretaceous- Jurassic	0-200	Cadna-Owie Formation	0-50	Confined	Highly variable across the project area, Water is generally suitable for stock, and in some areas is suitable for human consumption.

Description of the locality/area where different groundwater conditions may be encountered

This area is largely underlain by the Great Artesian Basin. It is expected that all drillholes in this area will encounter aquifers of the GAB, including the Algebuckina Sandstone, which is conformably (gradationally) overlain by the Cadna-Owie Formation.

Formation age and/or stratigraphic unit	Stratigraphic intervals (depth range) (m)	Aquifer formation name	Aquifer interval/thickness (From–to) (m)	Type of aquifer(s) intersected (e.g., unconfined, confined, artesian)	Provide aquifer salinity, depth to water level and any other relevant comments
Jurassic	0-150	Algebuckina Sandstone	1-100m	Confined	Highly variable across the project area,generally suitable for stock

Description of the locality/area where different groundwater conditions may be encountered										
Beneath the GAB is basement lithologies, which could be either Adelaidean-aged metasediments or Peake Metamorphics (Palaeoproterozoic- Archaean), or both. Target lithology is the Peake Metamorphics. All basement lithologies may have fractured rock aquifers										
Formation age and/or stratigraphic unit	nation age and/or iigraphic unit (depth range) (m) Aquifer formation name Aquifer interval/thickness (From-to) (m) Type of aquifer(s) intersected (e.g., unconfined, confined, artesian)									
Adelaidean- Archaean	300m+	Fractured rock	Variable, generally small	Confined	Unknown					

Provide the environmental value of each aquifer present determined according to the current Environment Protection (Water Quality) Policy.

The Cadna-Owie Formation and Algebuckina Sandstone are part of the Great Artesian Basin, forming the main aquifer in the Peake region.

These aquifers have the following environmental values

- 1) Primary industries- Livestock drinking water
- 2) Primary Industries- (Mining at Olympic Dam)
- 3) Aquatic ecosystems around mound springs
- 4) Drinking water for Human consumption (usually after desalination)
- 5) Tourism (aesthetics) in areas of mound springs.

Provide a description of the existence, location and value of all Groundwater Dependent Ecosystems (GDEs) within and immediately surrounding the project area.

Groundwater dependent ecosystems in the region fall into three categories, 1) Spring and seep-dependant, 2) Riparian (along creek and river beds and 3) Waterhole dependant. (Miles and Costelloe, 2015)

Within the area of interest (the five Exploration Licence and one ELa areas under consideration) there are NO mound springs or seeps known and there are no permanent waterholes. The only creeks within the tenements large enough to support GDE are Douglas Creek, Toongamoona Creek and Sunny Creek. Douglas Creek is significant in the Arabana Mythology probably for this reason.

Surrounding the project area are a large number of mound springs, seepages and other springs. Many of these have been fenced to prevent cattle from trampling around the springs and destroying the ecosystems built up around these water supplies. A group called "Friends of the Mound Springs" in conjunction with Arabana Rangers have made significant progress in protecting these ecosystems by maintaining the fencing around the springs, not just to keep cattle out, but also to keep tourists (and their vehicles) out. It is well documented that a great many mound springs throughout the region have declined in natural flow or completely dried up due to the lowering of the artesian pressure through extraction of water.

There are no mound springs within the Exploration Licence areas (Refer Map, "Southern Peake Project"). The exploration activities proposed in this document will have zero effect on the mound springs. There are no permanent water holes within the Exploration Licence areas. There are three documented Riparian GDE, the exploration activities will have no impacts. Refer Map, "Groundwater Dependent Ecosystems Atlas")

Miles CR and Costelloe JF, 2015, Lake Eyre Basin (South Australia): mapping and conceptual models of shallow groundwater dependent ecosystems, DEWNR Technical note 2015/22, Government of South Australia, through the Department of Environment, Water and Natural Resources, Adelaide

Is the proposed program located within a prescribed wells area or prescribed water resource area? If yes, provide the name of the area.

#### Far North Prescribed Wells Area

Provide any additional information, if required.

Previous drilling in the region by a number of exploration companies and water well drilling, demonstrates that sediments of the Eromanga basin/GAB – the Bulldog Shale and underlying Mt Anna Sandstone (Cadna-Owie) and Algebuckina Sandstone - are present as a variable horizon from 10-250m thick over most of the area, but that the Bulldog shale generally thickens to the east, away from the Cretaceous Islands of the Peake-Denison Ranges. Beneath the Eromanga basin is expected to be crystalline basement of the Peake Metamorphics suite. (Table below) It should be noted that within the area under consideration, there are very few drillholes that have penetrated into the Palaeoproterozoic rocks.

The top of crystalline meso/Palaeoproterozoic basement is expected to lie 100-300m below ground level. Little is known of possible water conditions in the basement. However, porosity and permeability of these rocks are expected to be very low. There may be fractured rock aquifers within the basement rocks

DEWNR reports on the Arckaringa Basin Aquifers were downloaded and examined:

• Arckaringa Basin aquifer connectivity, DEWNR Technical report 2015/14 https://www.waterconnect.sa.gov.au/SearchCenter/results.aspx?k=Arckaringa%20Basin%20aqui fer%20connectivity

Relevant conclusions from this report were:

- The Arckaringa Basin appears to have a complex architecture, largely dictated by fluvio-glacial activity. This has given rise to many sub-basins and therefore aquifers are likely to be more local.
- Two broad hydrostratigraphic units have been recognised a shallow GAB aquifer and a deeper Boorthanna (Permian)/basement aquifer.
- Interconnectivity between the GAB and Boorthanna aquifers is generally thought to be low. However, local variations may occur.

#### The Boorthanna aquifer is not within the area of interest.

Initial drilling operations through anticipated GAB or nearby will be very closely supervised by a Class-3 well driller. Construction and collaring of the drill hole will be such that control of artesian waters can be achieved through the use of fully sealed control casing which will allow the fitting of a control valve, should it be necessary.

Backfilling of the holes will be carried out as per the guidelines in M21, once drilling and sampling of the holes is complete. It is proposed that all exploration drillholes will be cemented from approximately 15m below the top of the Palaeoproterozoic to the top of the hole. By doing this, any chance of leakage or contamination from one aquifer to another is eliminated. This will completely seal the hole and isolate any aquifers from each other.

Descriptio	n of relevant g	eological and	hydrogeologica	al formations	within the pro	oject area
Period	Formation Name	Formation Age	Description	Depositional Environment	Hydrogeologica Characters	al Extent
Cretaceous	Coorkiana Sandstone	Albian	Predominantly carbonaceous, clayey, fine- grained sandstone and siltstone	High energy, Marine shore facies and gravel bars	Confined minor aquifer	Largely occurs in the Cooper Basin depocentre, Outcrops in areas around and east of Oodnadatta
	Oodnadatta Formation	Cenomanian to Albian	Laminated claystone and siltstone, with interbeds of fine- grained sandstone and limestone	Low energy, shallow marine	Confining layer with minor aquifers	Largely occurs in the Cooper Basin depocentre, Outcrops in areas around and east of Oodnadatta
	Bulldog Shale	Barremian to Albian	Gray marine shaley mudstone, micaceous siltand pyrite with very minor silty sands. Occasional Lodestones	Low energy, marine, cool climate	Main confining bed for Jurassic- Cretaceous aquifers	Large exposures in the south-west Eromanga Basin. Equivalent of the Wallumbilla Formation in Qld
	Cadna-Owie Formation	Valanginian to Barremian	Heterogeneous, mainly fine-grainer sandstone and pale gray siltstone Coarser sandstone lenses occur in the upper part of the formation	Transitional from Terrestrial freshwater to marine	Upper part is a very good aquifer with high yields of good quality water	Extends over most of the Eromanga Basin, with extensive outcrops in the south-west, forming many springs.
Jurassic	Algebuckina Sandstone	Toarcian to Valanginian	Fine to coarse- grained sandstone with granules and pebble conglomerate	Low gradient fluviatile, including rivers, floodplain. Both arid and wet climate	Major GAB Aquifer, High- yielding bores	Major unit within the Eromanga Basin in South Australia and Northern Territory, Large exposures in the south-west Eromanga, especially around Finniss Springs
Mesoproterozoic- Archaean	Crystalline Basement, Adelaide Geosyncline, Peake Metamorphics	Archaean to Cambrian	Crystalline Metasediments, gneiss, Volcanics, intrusives, metasediments	Broad	Localised fractured rock aquifers. Groundwater is recharged either by direct infiltration of rainwater or via drainage channels. Water volume and quality is highly variable.	Primarily outcropping in the Peake-Denison Ranges, Mt Woods inlier and south-east of Coober Pedy. Directly underlies the western Lake Eyre basin and Eromanga (GAB) basin.

Adapted from Tavis Kleinig, Stacey Priestley, Daniel Wohling and Neville Robinson Department of Environment, Water and Natural Resources June, 2015 DEWNR Technical report 2015/14

#### Native vegetation

Will you be working within areas of native vegetation? If yes, provide the following information:	Yes 🛛	No 🗆			
<ul> <li>description of the formation and structure of vegetation in the area (e.g., woodland, shrubland, grassland)</li> </ul>					
list of the dominant species.					
If no, indicate why you will not be working within areas of native vegetation?					
Vegetation Chenopod Shrub, Samphire Shrub and Forbland	-				
Vegetation Hummock Grassland					

#### Significant habitats and flora

If you are working within areas of native vegetation, use the table below to list any significant habitats and any rare or endangered flora species located or reported to have been in the area that may be impacted by the proposed program. Include known sightings of listed species on a locality plan/map.

Species/habitat	Common name	NPW Act rating*	EPBC Act rating <sup>†</sup>
Aristida arida	Kerosene grass	rare	Not listed
Goodenia anfracta		rare	Not listed
Swainsona minutiflora	Small-flower Swainson-pea	vulnerable	Not listed
Swainsona oligophylla		rare	Not listed

\* National Parks and Wildlife Act 1972 (NPW Act) conservation status includes extinct, endangered, vulnerable, threatened and rare.

† Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) listings include extinct, extinct in the wild, critically endangered, endangered, vulnerable and conservation dependent.

#### Weeds and pathogens

Provide information of the extent the area is affected or potentially affected by weeds and pathogens (e.g., phytophthora; buffel grass *Cenchrus ciliaris*).

According to the downloaded data from the Nature maps site, there are two records of buffel grass in the area (Last record was 1995), however it is highly unlikely that this invasive weed has not spread, so measures will be taken to prevent further spread, including supply of Buffel Grass information sheets and ensuring that all vehicles are thoroughly washed prior to travelling into the region and prior to moving between project areas, and prior to returning to the region after travelling outside of the region, to remove any adhering mud or other seed traps. This will also prevent the transport of any other seeds from elsewhere.

All vehicles, including trailers and caravans, will be washed thoroughly prior to departure from base, using high pressure washers. The contracted drilling company has its own dedicated wash-bays. All other vehicles will be washed in commercial wash-bays prior to departing Adelaide or at commercial wash bays (e.g. Clare or Port Augusta)

Vehicles will be rewashed prior to return to site (e.g. during crew-changes) during the drilling program.

#### Fauna

Describe the native and feral fauna that may be present in the application area, including feral species.

The full list of vertebrate fauna species (and one invertebrate) identified in the project area, generated from Naturemaps, is included below.

NSXCODE	CLASS NAME	SPECIES	COMMON NAME	NATIVE	NATIONAL RATING	STATE RATING	NUMBER OF RECORDS	DATE OF LAST RECORD
A00176	AVES	Ardeotis australis	Australian Bustard	Y		V	1	31-Jan- 1978
K04077	AVES	Hieraaetus morphnoides	Little Eagle	Y		V	1	05-Mar- 1996
C00001	AVES	Dromaius novaehollandiae	Emu	Y	ssp	ssp	2	05-Mar- 1996
U04118	AVES	Manorina flavigula	Yellow- throated Miner	Y	ssp	ssp	3	04-Mar- 1996
A00468	AVES	Aphelocephala pectoralis	Chestnut- breasted Whiteface	Y		R	1	06-Sep- 1966
U00174	AVES	Burhinus grallarius	Bush Stonecurlew	Y		R	1	28-Sep- 1996
M00154	AVES	Tringa glareola	Wood Sandpiper	Y		R	1	05-Mar- 1996
S02613	REPTILIA	Aspidites ramsayi	Woma	Y		R	2	26-May- 2014
S04117	AVES	Acanthagenys rufogularis	Spiny- cheeked Honeyeater	Y			2	03-Jul- 1995
S00481	AVES	Acanthiza uropygialis	Chestnut- rumped Thornbill	Y			1	05-Jul- 1995
S04125	AVES	Accipiter cirrocephalus cirrocephalus	Collared Sparrowhawk	Y			1	07-Mar- 1996
C04509	AVES	Amytornis modestus	Thick-billed Grasswren	Y	VU		2	14-Aug- 2016
W21059	AVES	Amytornis modestus indulkanna	Thick-billed Grasswren (NW)	Y	sp		16	07-Sep- 2007
W00211	AVES	Anas gracilis gracilis	Grey Teal	Y			3	06-Mar- 1996
G00647	AVES	Anthus australis	Australian Pipit	Y			17	14-Aug- 2016
U00466	AVES	Aphelocephala leucopsis leucopsis	Southern Whiteface	Y			1	05-Jul- 1995
C00469	AVES	Aphelocephala nigricincta	Banded Whiteface	Y			4	14-Aug- 2016
G04139	AVES	Aquila audax audax	Wedge-tailed Eagle	Y			4	07-Mar- 1996
Z04115	AVES	Artamus cinereus	Black-faced Woodswallow	Y			11	14-Aug- 2016
E21130	AVES	Artamus cinereus melanops	Black-faced Woodswallow (northern & eastern SA)	Y			1	20-Aug- 2007
Y00452	AVES	Ashbyia lovensis	Gibberbird	Y			8	06-Mar- 1996
M00294	AVES	Barnardius zonarius	Australian Ringneck	Y			1	03-Jul- 1995
W00271	AVES	Cacatua sanguinea gymnopis	Little Corella	Y			5	14-Aug- 2016

W08007	AVES	Calamanthus campestris	Rufous Fieldwren	Y	26	14-Aug- 2016
U04098	AVES	Calamanthus campestris campestris	Rufous Fieldwren (Nullarbor, EP, GR, YP, southern FR, MLR, LNE)	Y	1	20-Aug- 2007
E00602	AVES	Certhionyx variegatus	Pied Honeyeater	Y	10	08-Mar- 1996
M00358	AVES	Cheramoeca leucosterna	White-backed Swallow	Y	1	05-Mar- 1996
Z00439	AVES	Cinclosoma cinnamomeum	Cinnamon Quailthrush	Y	25	14-Aug- 2016
G21175	AVES	Cinclosoma cinnamomeum cinnamomeum	Cinnamon Quailthrush (central and eastern SA)	Y	3	20-Aug- 2007
W00423	AVES	Coracina maxima	Ground Cuckooshrike	Y	1	05-Jul- 1995
Z00691	AVES	Corvus bennetti	Little Crow	Y	5	07-Mar- 1996
A04144	AVES	Corvus coronoides	Australian Raven	Y	17	14-Aug- 2016
W00203	AVES	Cygnus atratus	Black Swan	Y	1	15-Apr- 1997
U04150	AVES	Dicaeum hirundinaceum hirundinaceum	Mistletoebird	Y	2	05-Jul- 1995
G04199	AVES	Egretta novaehollandiae	White-faced Heron	Y	3	15-Apr- 1997
Y00144	AVES	Elseyornis melanops	Black-fronted Dotterel	Y	1	04-Mar- 1996
C00273	AVES	Eolophus roseicapilla	Galah	Y	2	03-Mar- 1996
E00450	AVES	Epthianura aurifrons	Orange Chat	Y	15	14-Aug- 2016
S00449	AVES	Epthianura tricolor	Crimson Chat	Y	1	06-Mar- 1995
Z00331	AVES	Eurostopodus argus	Spotted Nightjar	Y	3	06-Mar- 1996
W00239	AVES	Falco berigora berigora	Brown Falcon	Y	3	05-Mar- 1996
C04129	AVES	Falco cenchroides cenchroides	Nankeen Kestrel	Y	9	14-Aug- 2016
Q00608	AVES	Gavicalis virescens	Singing Honeyeater	Y	11	07-Mar- 1996
Z00111	AVES	Gelochelidon macrotarsa	Australian Tern	Y	2	05-Mar- 1996
Z00031	AVES	Geopelia cuneata	Diamond Dove	Y	1	05-Mar- 1996
W00415	AVES	Grallina cyanoleuca cyanoleuca	Magpielark	Y	1	03-Mar- 1996
S00705	AVES	Gymnorhina tibicen	Australian Magpie	Y	8	20-Aug- 2007
Q00228	AVES	Haliastur sphenurus	Whistling Kite	Y	1	14-Aug- 2016
M00146	AVES	Himantopus leucocephalus	Pied Stilt	Y	1	06-Mar- 1996

C00213	AVES	Malacorhynchus membranaceus	Pink-eared Duck	Y	1	03-Mar- 1996
Z21179	AVES	Malurus assimilis assimilis	Purple-backed Fairywren	Y	7	05-Jul- 1995
Z00535	AVES	Malurus leucopterus leuconotus	White-winged Fairywren	Y	64	14-Aug- 2016
E00310	AVES	Melopsittacus undulatus	Budgerigar	Y	6	14-Aug- 2016
C00329	AVES	Merops ornatus	Rainbow Bee- eater	Y	1	03-Mar- 1996
S00229	AVES	Milvus migrans affinis	Black Kite	Y	11	14-Aug- 2016
Y00304	AVES	Neopsephotus bourkii	Bourke's Parrot	Y	3	05-Jul- 1995
E00274	AVES	Nymphicus hollandicus	Cockatiel	Y	1	14-Aug- 2016
W00043	AVES	Ocyphaps lophotes lophotes	Crested Pigeon	Y	13	14-Aug- 2016
G00419	AVES	Oreoica gutturalis	Crested Bellbird	Y	1	05-Jul- 1995
K00145	AVES	Peltohyas australis	Inland Dotterel	Y	11	01-Jan- 2005
A04128	AVES	Petrochelidon nigricans	Tree Martin	Y	1	05-Mar- 1996
K00381	AVES	Petroica goodenovii	Red-capped Robin	Y	2	07-Mar- 1996
K00313	AVES	Podargus strigoides	Tawny Frogmouth	Y	1	04-Jul- 1995
E00062	AVES	Poliocephalus poliocephalus	Hoary-headed Grebe	Y	1	03-Mar- 1996
K00445	AVES	Pomatostomus superciliosus	White-browed Babbler	Y	4	05-Jul- 1995
E00866	AVES	Psophodes cristatus	Chirruping Wedgebill	Y	14	14-Aug- 2016
S00625	AVES	Ptilotula penicillata	White-plumed Honeyeater	Y	4	14-Aug- 2016
M00594	AVES	Purnella albifrons	White-fronted Honeyeater	Y	1	28-Aug- 1984
Q00148	AVES	Recurvirostra novaehollandiae	Red-necked Avocet	Y	3	15-Apr- 1997
M04114	AVES	Rhipidura leucophrys leucophrys	Willie Wagtail	Y	3	03-Mar- 1996
C00061	AVES	Tachybaptus novaehollandiae novaehollandiae	Australasian Grebe	Y	1	03-Mar- 1996
E09442	AVES	Taeniopygia guttata castanotis	Zebra Finch	Y	33	14-Aug- 2016
G04219	AVES	Vanellus miles	Masked Lapwing	Y	2	06-Mar- 1996
G05555	INVERTEBRATES	Ngarawa dirga	species of ostracod	Y	3	11-Jul- 1995
K09005	MAMMALIA	Dasycercus cristicauda	Crest-tailed Mulgara (Ampurta)	Y	11	16-May- 2013
S01441	MAMMALIA	Leggadina forresti	Central Short- tailed Mouse (Forrest's Mouse)	Y	3	07-Mar- 1996

W01275	MAMMALIA	Macropus (Osphranter) rufus	Red Kangaroo	Y	1	26-Sep- 1995
K01481	MAMMALIA	Notomys alexis	Spinifex Hopping- mouse	Y	14	16-May- 2013
S10525	MAMMALIA	Notomys sp.		Y	8	16-May- 2013
Z01335	MAMMALIA	Nyctophilus geoffroyi	Lesser Long- eared Bat	Y	1	06-Mar- 1996
Z10487	MAMMALIA	Planigale sp.		Y	1	12-Nov- 1969
E01446	MAMMALIA	Pseudomys desertor	Desert Mouse	Y	1	12-Nov- 1969
K01449	MAMMALIA	Pseudomys hermannsburgensis	Sandy Inland Mouse	Y	3	07-Mar- 1996
A01400	MAMMALIA	Rattus villosissimus	Long-haired Rat (Plague Rat)	Y	1	12-Nov- 1969
A01072	MAMMALIA	Sminthopsis crassicaudata	Fat-tailed Dunnart	Y	8	08-Mar- 1996
C01073	MAMMALIA	Sminthopsis macroura	Stripe-faced Dunnart	Y	14	08-Mar- 1996
A02588	REPTILIA	Anilios bituberculatus	Rough-nosed Blind Snake	Y	1	01-Nov- 1992
W02199	REPTILIA	Ctenophorus pictus	Painted Dragon	Y	4	04-Mar- 1996
Q04108	REPTILIA	Ctenotus olympicus	Saltbush Ctenotus	Y	9	08-Mar- 1996
U02374	REPTILIA	Ctenotus regius	Eastern Desert Ctenotus	Y	7	27-Apr- 1996
G02379	REPTILIA	Ctenotus schomburgkii	Sandplain Ctenotus	Y	6	04-Jul- 1995
A02384	REPTILIA	Ctenotus strauchii	Short-legged Ctenotus	Y	18	27-Apr- 1996
C04189	REPTILIA	Ctenotus taeniatus	Eyrean Ctenotus	Y	8	27-Apr- 1996
A02076	REPTILIA	Diplodactylus tessellatus	Tessellated Gecko	Y	3	27-Apr- 1996
G04543	REPTILIA	Eremiascincus phantasmus	Ghost Skink	Y	11	08-Mar- 1996
U02438	REPTILIA	Eremiascincus richardsonii	Broad-banded Sandswimmer	Y	6	07-Mar- 1996
Z02807	REPTILIA	Furina ornata	Moon Snake	Y	1	01-Nov- 1992
A02092	REPTILIA	Gehyra variegata (NC)	Tree Dtella	Y	3	02-Mar- 1996
C02105	REPTILIA	Heteronotia binoei	Bynoe's Gecko	Y	9	27-Apr- 1996
Z02487	REPTILIA	Lerista labialis	Eastern Two- toed Slider	Y	1	16-Apr- 1979
K04421	REPTILIA	Lerista timida	Dwarf Three- toed Slider	Y	4	27-Apr- 1996
Y02052	REPTILIA	Lucasium byrnei	Gibber Gecko	Y	4	08-Mar- 1996
K02109	REPTILIA	Lucasium damaeum	Beaded Gecko	Y	3	08-Mar- 1996

Q04424	REPTILIA	Lucasium microplax	Central Sandplain Gecko	Y	13	08-Mar- 1996
W02519	REPTILIA	Menetia greyii	Dwarf Skink	Y	12	08-Mar- 1996
S02525	REPTILIA	Morethia adelaidensis	Adelaide Snake-eye	Y	3	06-Mar- 1996
U02526	REPTILIA	Morethia boulengeri	Common Snake-eye	Y	2	04-Mar- 1996
A02112	REPTILIA	Nephrurus levis	Common Knob-tailed Gecko	Y	1	26-Apr- 1996
Y02204	REPTILIA	Pogona vitticeps	Central Bearded Dragon	Y	4	27-Apr- 1996
U02690	REPTILIA	Pseudechis australis	Mulga Snake	Y	1	08-Sep- 1990
S04425	REPTILIA	Pseudonaja aspidorhyncha	Patch-nosed Brown Snake	Y	4	18-Aug- 2014
M02698	REPTILIA	Pseudonaja nuchalis (NC)	Western Brown Snake	Y	2	05-Mar- 1996
S02137	REPTILIA	Rhynchoedura ornata (NC)	Beaked Gecko	Y	6	08-Mar- 1996
E02254	REPTILIA	Tympanocryptis intima	Smooth- snouted Earless Dragon	Y	3	07-Mar- 1996
K02257	REPTILIA	Tympanocryptis tetraporophora	Eyrean Earless Dragon	Y	32	27-Apr- 1996
U02138	REPTILIA	Underwoodisaurus milii	Common Barking Gecko	Y	20	27-Apr- 1996
G02271	REPTILIA	Varanus gouldii	Sand Goanna	Y	4	07-Mar- 1996
<mark>E01518</mark>	MAMMALIA	Bos taurus	Cattle (European Cattle)	N	<mark>16</mark>	<mark>10-Jun-</mark> 2006
W01515	MAMMALIA	Camelus dromedarius	One-humped Camel (Dromedary, Arabian Camel)	N	1	<mark>07-Jun-</mark> 2006
<mark>M04106</mark>	MAMMALIA	Canis lupus dingo	<mark>Dingo</mark>	N	<mark>21</mark>	<mark>16-May-</mark> 2013
<mark>Y01536</mark>	MAMMALIA	Felis catus	<mark>Domestic Cat</mark> (Feral Cat)	N	3	<mark>16-May-</mark> 2013
<mark>Y01412</mark>	MAMMALIA	Mus musculus	House Mouse	N	<mark>5</mark>	<mark>07-Mar-</mark> 1996
M01510	MAMMALIA	Oryctolagus cuniculus	Rabbit (European Rabbit)	N	 <mark>51</mark>	<mark>16-May-</mark> 2013
<mark>A01532</mark>	MAMMALIA	Vulpes vulpes	Fox (Red Fox)	N	9	<mark>16-May-</mark> 2013

### Significant fauna

Where possible, using the table below, list any rare or endangered fauna species located or reported to have been in the area that may be impacted by the proposed program. Include known sightings of listed species on a locality plan/map.

Species	Common name	NPW Act rating	EPBC Act rating
Aphelocephala pectoralis	Chestnut-breasted Whiteface	rare	Not listed
Ardeotis australis	Australian Bustard	vulnerable	Not listed
Burhinus grallarius	Bush Stonecurlew	rare	Not listed
Hieraaetus morphnoides	Little Eagle	vulnerable	Not listed
Tringa glareola	Wood Sandpiper	rare	Not listed
Aspidites ramsayi	Woma	rare	Not listed

Note: NPW Act conservation status includes extinct, endangered, vulnerable, threatened and rare.

EPBC Act listings include extinct, extinct in the wild, critically endangered, endangered, vulnerable and conservation dependent.

#### **Environmentally sensitive locations**

Are there any environmentally sensitive locations within or close to the proposed exploration area (e.g., areas having particular ecological, cultural, scientific, aesthetic or conservation value)? If yes, provide a description of identified environmentally sensitive location(s). Mark these areas on a locality plan to identify any areas of conflict so that access roads or other activities can be planned and located effectively.	Yes 🗌	No 🖾
There are a significant number of mound springs within the region, although there are none within the licence areas nor areas outside of the licences that may be affected by exploration activities. The performation activities will have no perceivable effect on any mound springs. There will be no extract groundwater for drilling, all water required for drilling will be sourced from surface catchments (Turk with the approval of the pastoralists. GDE are considered as potentially sensitive ecosystems. With the exception of established tracks,	the explo lanned ion of cey-nest they will	dams) not be
See attached maps. Are you likely to impact on the environmentally sensitive area? If yes, detail the likely effects the proposed program may	Yes 🗌	No 🖂
<pre>rave. </pre>		
Include a statement concerning whether or not an Aboriginal heritage survey has been conducted by the proponent and if s survey.	o, the resu	Its of the
Three Heritage Clearance Surveys have been conducted across the project area in the last two year accordance with our NTMA with the Arabana, all drill sites are required to be cleared by a field-bas survey. This has been completed at all of the currently identified exploration target sites. Any future yet identified would go through the same process of field based heritage survey in accordance with number of sensitive areas were identified, including some areas littered with numerous artefacts. C was eliminated due to its proximity to Douglas Creek and within several other areas exclusion zone declared. These areas will be geofenced and avoided during further exploration activities.	ars. In ed herita drill targ the NTN ne targe s were	age gets not MA. A et area

of the NTMA, considered to be confidential.

#### SECTION D- DESCRIPTION OF PROPOSED EXPLORATION OPERATIONS

Include a description of the proposed operations. Each of the elements listed in below must be described only to the extent that they apply to the proposed exploration program.

#### **Exploration scope**

Describe the scope of the proposed exploration operations and detailing the following:

- all exploration methods to be covered by the PEPR.
- extent of exploration operations e.g., drillhole spacing and drill line density.
- geographic extent of the area covered by the PEPR, including a general locality plan with tenement details, landowner boundaries and areas with environmental classifications or sensitivities.
- specific environments where exploration operations will not be conducted e.g., parks, reserves, salt lakes etc.

Copper Search Limited has recently finished a series of infill gravity surveys across parts of the project area. These activities are conducted under the generic EPEPR.

Copper Search Limited has also completed, in December 2021, one diamond hole to a depth of 730m, under EPEPR2021-19, at the Douglas Creek target within EL6195.

This EPEPR is being submitted to cover the scope of activities associated with deep diamond drilling. Copper Search Limited has defined approximately 30 targets with the use of the GCAS magnetic data and Gravity data downloaded from SARIG, in conjunction with Copper Search's own gravity data acquired during the 2022 calendar year. A trial of Induced Polarisation eliminated several targets where the method was deemed to have worked, however the presence of conductive Bulldog Shale, thickening to the east in the project area, has prevented the method from working over many of the targets.

It is expected that this program will initially be limited to six drillholes, however it will be extended if there are sound technical reasons.

Each selected target will be tested with one deep diamond drillhole, to a minimum depth of 400m, with a rotary mud pre-collar to basement. The Rotary mud pre-collar will be cased off and cemented to form a seal around the collar/casing to prevent pressurised artesian water either moving up the inside of the casing or, in the worst scenario, moving up the outside of the casing.

The targets are broad-spaced, so the initial drilling program will have holes no closer than 400m apart. Should the program be successful and further drilling is appropriate at any of the targets, drill-spacing may be reduced.

The EPEPR is intended to be tenement-wide across all six listed exploration licence areas. These tenements are entirely within the Anna Creek Station (Williams Cattle Company), with the exception of EL6181, which is mostly within the Stuart Creek Cattle Station. Within these five tenements there are no permanently occupied dwellings nor any other form of dwelling. There are no specific areas of environmental sensitivities and no areas that will be excluded from the exploration program, except as per the Mining Act regarding exempt land around stock watering points and any other exempt areas by reason of other infrastructure or Heritage Surveys.

There are no parks, reserves, etc within the license areas. There are several salt lakes and large clay-pans. These will be avoided for all ground-based exploration activities. There is a Native Vegetation Heritage Agreement Area currently under application over part of the south-eastern corner of EL6181. This area is outside of the areas of interest for CUS's exploration activities.

There may be further activities conducted under the generic PEPR, such as soil and rock sampling, other groundbased and possible airborne geophysical methods, and mapping.

Refer to the attached map for tenement boundaries, pastoral boundaries and the NVHAA Application. The location of exclusion zones as determined during the Heritage Clearance Surveys remain confidential, as per the NTMA.

#### Equipment and personnel requirements

Describe the maximum composition of field crews (operator, contractors, and geologists) and proposed working hours/days for each type of activity.

#### Copper Search's field crew may consist of the following

1) 2 geologists, swapping over on a three-week on, ten days off roster or similar, synchronised with the drilling contractors.

The drilling contractor's crew will consist of two crews (Day-shift and night-shift) of the following, on a three-week on, ten days off roster, or similar

- 1) Senior/chief driller
- 2) Second driller/first offside
- 3) Offsider
- 4) Class 3 certified driller with GAB endorsement as and when needed during each drillhole.

These numbers are based on operating two 12-hour shift per 24 hours. Typically, there will be 8 people on site at most times.

The current drilling contractor engaged by CUS is planning on working three weeks-on, ten days off, with the rig shut down during the 10 day period. Thus for the most part, if this situation endures, there will be typically of 8 people on-site.

Using the table below, describe the equipment (size, number and contractor details) required to conduct the proposed operations.

Equipment type	Owner/operator	Description/capacity	Activity/purpose
Landcruiser tray	CUS	1-tonne 4WD	Transport of core, supplies, towing,
Landcruiser dual cab	CUS	Half-tonne dual cab, five-seater	Personnel transport, supply transport, towing.
Bushtracker Caravan	CUS	Off-road capable tandem axle caravan	Accommodation/kitchen/office/etc
Tandem Axle trailer #1	CUS	3 tonne capacity	Generator, Fuel tank and water tank for CUS camp
Tandem Axle trailer #2	CUS	3 tonne capacity	General Purpose for transporting heavy/bulky supplies, core trays (new and full) etc.
Drill rig	Drilling contractor	UDR 650 or similar, NQ core to 850m	Drilling RM and Diamond, plus towing caravan
Support trucks x 2 and dolly-trailers	Drilling contractor	10 tonne capacity, 6- WD	Water tanker (9000 litres) fuel tank (3000 litres), trailers carrying drill rods and other equipment plus drilling disposables
Caravan	Drilling contractor	Off-road capable tandem axle caravan	Accommodation/kitchen/office/etc
Hino dual Cab 4x4 truck	Drilling contractor	two-tonne dual cab, five-seater	Personnel transport, supply, spares etc.
Landcruiser Dual Cab or similar	Drilling contractor	Half-tonne dual cab, five-seater	Personnel transport, supply transport,

Assorted other equipment	Drilling contractors	Pumps, rod handlers,	Drilling equipment
		rod racks, core racks,	
		etc generator	

#### Low impact exploration activities

Will low impact exploration operations be conducted that are not covered by the Generic program for environment protection and rehabilitation – low impact mineral exploration in South Australia, (generic PEPR)? If yes, describe each type of low impact operations proposed.	Yes 🗌	No 🛛
<include here.="" text=""></include>		

#### **Drilling Operations**

Will exploration drilling activities be conducted? If yes, identify all the drilling methods that may be used.									Yes 🛛	No 🗆	
AC	RAB	RM	RC	DD	AC/DD	RAB/DD	RM/DD	RC/DD	Vibracore	Auger	Other
							$\boxtimes$				

AC = aircore, RAB = rotary air blast, RM = rotary mud, RC = reverse circulation, DD = diamond drilling, AC/DD = aircore with diamond tails, RAB/DD = rotary air blast with diamond tails, RM/DD= rotary mud with diamond tails, RC/DD = reverse circulation with diamond tails.

Where 'Other' drilling method is selected, provide a description of the drilling method.

NA		

#### **Drillsite preparation**

If exploration drilling activities are proposed, describe the methods used to prepare sites, including vegetation clearance requirements, site levelling and digging of sumps.

At each drill site, there will be a need to provide a safe working area. Due to the regional nature of the program, and the size of the targets, there will be enough latitude to move the drillsite by up to 100m to avoid vegetation and other sensitive features (eg sand dunes, claypans, saltpans). When required, vegetation at the drillsites will be removed by hand-tools, rather than clearing a site using a loader etc, unless it is absolutely necessary (for example widespread dense vegetation). If it is deemed necessary to clear the drill site using a loader (or similar), care will be emphasised to the operator to remove as little soil as possible to produce a safe working surface for the personnel.

The drill contractor has requested three sumps for each drillsite (Photos 3 and 6), one for catching the excess Rotary Mud drill chips and sludge and two for water circulation during the diamond drilling phase. Sumps will be dug using the landholder's front-end loader. Each sump will be approximately 3mx4mx1.3m, for a usable volume of about 7.5 cubic metres each, considering that the ends of each sump will be ramped to allow egress by any trapped animals, and that the sumps cannot be filled to brim-full.

In excavating the sumps, the contractor will be instructed to stockpile the topsoil separately from the rest of the material dug out, to allow restoration of the topsoil (and associated biobank) in its proper place. (Photo 2) The area required for each drillsite (including sumps and stockpiled soil and campsite) will be in the order of 50x50m (0.25 ha)

#### Drillhole construction and decommissioning

Have the personnel responsible for implementing the proposed program read and understood the Earth Resources	Yes 🖂	No 🗆
Information Sheet M21, Mineral exploration drillholes – general specifications for construction and backfilling?		

Describe how drillholes will be constructed, including the casing material to be used, depth of casing, if the casing will be cemented, cementing intervals and the class of driller that will install the casing.

Construction of the drillhole collar and casing and getting the casing fully cemented and stable is considered as critical in this region due to the chances of intersecting high pressure water from the Great Artesian Basin. It is expected that the only aquifer in the drillholes would be the combined Cadna-Owie formation and the Algebuckina Sandstone, however there may also be fractured rock aquifers in the basement. Collar construction will be complex and require cementing of casing at several depths and at each casing diameter step-down.

Each hole will be drilled in several stages, with progressively smaller diameter casing being used. 10-inch PVC casing would be used for the top of the hole, essentially to hold-back sand and loose regolith. This will be cemented into the ground and will probably only need to be 12m in depth, depending on soil type and depth.

8 ½ -inch tricone bit (rotary mud) will then be used to drill into the Bulldog Shale, where steel casing will then be cemented into place, thus forming an effective bore control collar. A control valve fitting will be installed in the collar to allow the rapid attachment of a control valve should high pressure artesian water be encountered. This will allow the hole to be effectively shut off. An FIT (Formation Integrity Test) will be conducted immediately below the shoe depth of the 8 ½ inch casing, to allow the calculation of maximum mud weight.

PQ tricone or blade bit will then be used to drill through the lower part of the Bulldog Shale and Cadna-Owie and Algebuckina to hard rock below the Algebuckina (GAB Aquifers). PQ diameter steel casing will then be cemented in place to completely isolate the GAB aquifers.

HQ diamond coring bit will then be used to drill to the targeted depth.

A class 3 water bore driller with a GAB endorsement will be on-site during all phases of the operations through to basement, directly supervising the whole drilling operations, and will have the authority to terminate any drilling that is deemed too risky.

Depths of each casing element will vary between locations and will be determined on the fly, in consultation with the site geologist, Class three driller and the rig driller.

When describing drillhole decommissioning requirements, include the materials to be used, stratigraphic intervals where cement plugs will be placed, if the casing will be removed and when decommissioning will occur after drilling is completed.

Given that the aquifers have been isolated with cemented-in-place steel casing, to allow possible downhole geophysics of the basement, the hole will remain accessible with a control valve left in place at the surface.

Where confined or artesian conditions are expected, include a schematic diagram demonstrating how drillholes will be constructed and decommissioned

#### Costeans and bulk sample disposal pits

Will costeans/bulk sample disposal pits be required for the proposed program? If yes, indicate the maximum dimensions and size of pits and costeans.	Yes 🗌	No 🛛
<if here.="" include="" text="" yes,=""></if>		
Describe site preparation methods, vegetation clearance, and safety and maintenance requirements if pits and costeans are	required.	
<include here.="" text=""></include>		

#### Sample management

Describe the size of samples collected (including drilling samples and bulk sampling), collection methods, materials used when collecting the sample, sample disposal methods (including removal of sample bags), safety management and any other sample management requirements at the exploration site (e.g., tarps or matting used to contain cuttings). Include requirements for on-site geological sample management (splitting of archive samples, bag farms, core processing and storage).

During the Rotary Mud phase of drilling, samples will be collected over each metre using a shovel or sieve to collect the samples as they flush out of the drill collar. Samples will be placed on the ground in rows for collection, examination, logging, and sampling by the site geologist. Samples are typically in the order of 1-2kg (wet), with a few hundred grams from each metre being composited into 3-metre samples for analysis. The remainder of the sample will be left on the ground and eventually buried when the site is rehabbed (Photo 5). Due to the nature of Rotary Mud drilling, excess sample material not collected directly from the drillhole collar will be flushed directly into the drill sumps and be buried when the sumps are filled in during the site rehabilitation stage.

Drill core will be collected as per standard drilling procedures, placed into plastic core trays for processing (measuring, marking and other processing), logging, petrophysics (SG, Magsusc, RQD) and initial analysis (handheld XRF). Core cutting and sampling will be done off-site, most likely by a contractor in Adelaide and be securely stored, most likely either at Euro Exploration Services or Challenger Geological Services.

#### Access routes to work areas

Will existing tracks require upgrading and/or maintenance? If yes, detail the work required to upgrade/maintain existing tracks.	Yes 🛛	No 🗆				
Existing station tracks will be used to get as near as practical to the drill sites and then cross-country to the drill sites. It has been agreed with the station owners that the company will have the station tracks graded at the company's cost at the end of the drilling program or as appropriate.						
Will access off existing tracks be required? If yes, detail the method(s) for gaining access and if vegetation clearance is required. Details of the total area of disturbance (includes drill traverses and seismic lines) required off existing tracks (i.e., length (km) and width (m) of new tracks) must be provided in the program notification.	Yes 🛛	No 🗌				
Access tracks from station tracks to the proposed drill sites will be required.						
Note that all of the proposed access routes have been surveyed during the Heritage Clearance survey.						
These tracks will be scouted and routed to avoid any sensitive areas, such as sand dunes, claypans, salt lakes and surrounds/shoreline, specific vegetation (for example areas of dense spinifex spp, or areas of substantial vegetation, or any identified listed species).						
Tracks will be formed with light vehicles initially demarking the track, followed by front-end loader a the site to construct the sumps. There will be no digging/grading or other earthworks needed during the access tracks, other than perhaps some removal of some vegetation if unavoidable. The landhor to form a clear track to reduce potential damage to their equipment. Due to the nature of the vegeta area, there will be no need to remove parts of any trees, as there are relatively few trees in the reginancess track will be routed around any trees encountered.	s it acces g the forr older ma ation in th on and t	sses ning of y elect ne he				

Where possible, indicate planned access routes on a locality plan and distinguish between existing and proposed new access tracks and drill lines (including fence lines).

#### Campsites, storage, and equipment laydown areas

Provide a description of campsites and/or laydown areas required. Indicate the campsite and laydown area on a locality plan.

#### Campsite details

Indicate where staff and contractors will be accommodated during the exploration program.

During the drilling program, a mobile camp will be established at each drillsite. The camp will consist of two caravans, one or two generators and associated equipment (water tanks, pumps and hoses, extension leads, bunded fuel storage, etc)

What is the maximum number of personnel requiring accommodation?

Is a campsite required to be established? If no, no further information is required.

Provide a description and justification of the camp location (e.g., previously cleared areas etc.), and any other relevant information.

10

No 🗌

Yes 🖂

Laydown area det	ails				
Porta-loo		1	Portable self-contained toilet. free-standing or trailer	-mounte	ed
1000litre bunde	ed poly fuel tank	2	Fuel for CUS generator and vehicle, on a fully bund	ed area	lined
9 KVA generate	or	2	One for each caravan		
200 litre poly w	ater drum	2	Drinking/cooking water		
1000 litre IBC		2	Provide potable water for each caravan, including el pump and associated hoses.	ectric-po	owered
Tandem axle C "Silver Bullet" C	aravan Caravan (Photo 1)	2	One for drill crew, one for CUS personnel, to be use accommodation, kitchen, office, and ablutions.	d as	
Proposed infrastr caravans, tents, o and water storage	ucture (includes ffices, hydrocarbon, e requirements etc)	Quantity	Description/capacity		
Porta-loo to coi caravan with ca	mply with Hire and R artridge-type toilet.	ental Indu	stry Association Ltd Portable Toilet Division Code of	Practice	, and
Are the proposed a applicable? If no, ir	blution facilities endorsed ndicate why.	l/approved fo	r use by the Department of Health or local council, where	Yes 🛛	No 🗆
Shallow pit han cubic metres	d dug and lined with	PVC shee	et to form a bunded fuel storage area for generator fu	el supply	y. >0.5
Shallow hand-o the ground.	lug pits for graywate	r disposal/	soakage. >0.5 cubic metres, or just allowing graywat	er to soa	ak into
Will any excavatior If yes, describe the	ns be required? purpose of the excavatio	n and the ma	aximum volume (m <sup>3</sup> ) of material to be excavated.	Yes 🛛	No 🗆
The campsite v	vill be immediately a	djacent to	or very close to the drillsite, cleared by hand.		
If vegetation cleara	nce is required, describe	the methods	used to prepare the site.		
What will be the to	al area (ha) of vegetation	clearance fo	r the campsite?	<0.25	na each
What will be the to	al area (ha) of the camps	ite(s)?		<0.25	ha each
5)	reducing fuel consu	imed by ve	ehicles		
3)	Reducing the chan	ijury or de ce of impa	ct with animals (native animals or cattle)		
2)	reducing the impac	t on establ	lished station tracks		
1)	reducing the impac	t on new a	ccess tracks,		
This has a nur	nber of benefits				
the sites are co	nveniently close.				

What will be the total area (ha) of vegetation clearance for the site?

What will be the maximum area (ha) required for the laydown area(s)?

If vegetation clearance is required, describe the methods used to prepare the site.

Laydown area will be included within the drillsite/camp area

Will any excavations be required? If yes, describe the purpose of the excavation and volume ( $m^3$ ) of material to be Yes  $\Box$  excavated.

ha

ha

No X

<include here.="" text=""></include>					
Proposed infrastructure (includes hydrocarbon and water storage requirements)	Quantity	Description/capacity			

#### Other exploration methods and/or ancillary operations

Are any other proposed exploration methods (e.g., seismic) and/or ancillary exploration operations required? If yes, describe the activity(s), site preparation, vegetation clearance, and safety and maintenance requirements.	Yes 🗌	No 🖂
<pre><if here.="" include="" text="" yes,=""></if></pre>		

#### Water supply and management

Will camp and/or drilling water be required?	Yes 🖂	No 🗆			
If yes, describe how and where water will be sourced for drilling, track maintenance and camping purposes (e.g., groundwater, surface water, mains). Indicate how wastewater and/or runoff water will be managed.					
Water for drilling and camp (washing water) is by agreement with the landholder, from the closest turkey-nest Water will be transported using the drill contractor's truck equipped with 7500 litre capacity tanks.					
Graywater from the camp will be drained into hand-dug soakage pits, to be backfilled when the can removed. Disposal of blackwater will be as needed, the camp having a portable self-contained toile Hire (or similar), which will be exchanged with an empty unit when required. One caravan also has toilet which can be emptied and cleaned at the appropriate facility in William Creek when required.	np has b et, from ( a cartrid	een Coates Ige			
Will surface water and/or mineral drillholes be used as a water source/supply? If yes, indicate if a licence for water extraction/usage is required (refer to relevant Natural Resources Management water allocation plan available on the <i>Department for Environment and Water</i> (DEW) website. If a licence is required and has been obtained, please attach a copy. Where a licence has not been obtained, include a statement confirming that a licence will be obtained before the extraction and/or usage of water.	Yes 🗆	No 🛛			

#### (Dead Link given above)

Surface water will be used during the drilling program, sourced from turkey-nest dams, with agreement form the pastoral lease holder.

#### Groundwater and drilling investigation activities

Will any water bores be required and/or water investigation activities (e.g., pump testing, water monitoring sites, water storage, turkey nests/dams) be conducted?	Yes 🗌	No 🛛
If yes, describe the water drilling and investigation activities, including site preparation, vegetation clearance, and safety and maintenance requirements.		
Indicate if well permits have been obtained and whether or not a water extraction licence is required in accordance with the Landscape South Australia Act 2019.	Yes 🗌	No 🗆
If yes, attach a copy of the permit(s)/licences. If no, provide a statement confirming that permits/licences will be obtained prior to commencement of water investigation activities.		
A water extraction licence is not required for this drilling program. All water requirements for drilling water will be met from local turkey-nest dams, with approval from the landholder.	and can	np
If water is encountered downhole, samples may be taken for water quality analysis and trace eleme Water samples would be in the order of a litre.	ent analy	/sis.

#### Water affecting activities

Will any water affecting activities, other than drilling a water well, be undertaken (refer to s. 127 of the Landscape South Australia Act 2019)?	Yes 🗌	No 🖂
If yes, attach a copy of the permit. If a permit has not been obtained, provide a statement confirming that a water affecting activity permit(s) will be obtained and provide a description of the site preparation, vegetation clearance, and safety and maintenance requirements.		
No water affecting activities will be undertaken.		

#### Management of hazardous materials

Will activities be conducted in areas of known uranium and thorium mineralisation?	Yes 🗌	No 🖂
If yes, attach a Radiation Management Plan and confirmation of endorsement of the plan by the Environment Protection Authority South Australia (EPA).		
Will any other hazardous material be encountered when exploring in the area? If yes, list the types of hazardous materials and provide a management plan on how these materials will be managed.	Yes 🗌	No 🖂
<if here.="" include="" text="" yes,=""></if>		

#### Rehabilitation

Detail all the activities and strategies relating to the remediation of all impacts associated with the proposed exploration operations (includes exploration camps and laydown areas, tracks).

Completion of rehabilitation must be achieved within 3 months after the expiry of each program notification.

- 1) Drillsites. All drillsites will be remediated as soon as possible after drilling has been completed. As soon as activities at each individual site is completed, an inspection will be made, any rubbish removed, any residual hydrocarbon spills immediately addressed, the drillhole will be left capped (if it has not been cemented to the surface).Drill cuttings from the pre-collar will be placed into the sumps. The sumps will be back-filled with the soil removed during construction and the top soil will be reinstated. The drillsite will be scarified (if required) with the tynes on the Front-end loader bucket to break up any compacted soil, and wheel-tracks will also be scarified. This produces seed traps and assists with re-growth of colonising species.
- 2) Campsites. As soon as each campsite is vacated, an inspection will be made to collect any rubbish. Any hydrocarbon contamination will be immediately remedied by removing the contaminated soils into plastic bags (Green RC bags). These will then be stored on site until they can be removed to a suitable disposal site. Graywater soakage pits will be back-filled as soon as they have emptied (soaked/evaporated),

State the estimated budget required to rehabilitate all impacted sites.

Estimated 8 hours operating time per drillsite at charged rate of \$250 per hour. Includes time for mobilising between sites.

Total estimated at \$2000 per drill site. + GST if applicable

#### Vegetation Clearance

Will any area of cleared native vegetation be unrehabilitated after the authorised period?	Yes 🗌	No 🖂
If yes, provide a map and description of the vegetation present in the application area, the extent of any proposed vegetation clearance and the likelihood of the presence of threatened flora.		
State the estimated <b>quantum</b> of significant environmental benefit (SEB) to be gained in exchange for the proposed native vegetation clearance and describe how the SEB will be provided.		
Quantum- the smallest increment of energy- how is this relevant?		

#### SECTION E – LEASE CONDITIONS

#### **Retention leases**

Where the retention lease includes specific conditions that are not environmental outcomes, demonstrate where these have been addressed in the PEPR (if relevant) or demonstrate how otherwise they have or will be complied with.

Not applicable

#### SECTION 6 – MANAGEMENT OF ENVIRONMENTAL IMPACTS

Use the table below (instructions provided) to identify all of the potential environmental, social and economic impact events that are likely to occur as a result of the proposed exploration operations, how each of the identified impacts will be managed, and the residual risk, i.e., the level of risk remaining after implementing control and management strategies. Identified potential impact events should be developed based on the aspects of the environment that may be impacted on and the proposed operational details. Potential impact events must have corresponding outcomes and measurement criteria.

Where the terms and conditions of an RL include environmental outcomes, list them (where different) in the table below and complete all sections (receptor, potential impacts, control strategies, risk assessment and measurement criteria).

#### Environmental management – potential impacts/events, outcomes, measurable criteria, and monitoring plan

			Likelihood of consequence (LH)								
		1 2 3		4	5						
			Rare	Unlikely	Possible	Likely	Almost certain				
(c	A	Insignificant	Low	Low	Low	Low	Low				
of e (C(	В	Minor	Low	Low	Moderate	Moderate	Moderate				
erity lenc	С	Moderate	Moderate	Moderate	High	High	High				
Sevi	D	Major	High	High	Extreme	Extreme	Extreme				
con	E	Catastrophic	High	Extreme	Extreme	Extreme	Extreme				

Use the above matrix to conduct an impact assessment for each potential impact.

#### How to fill out the table

- Based on the description of the environment and exploration operations, indicate which potential impacts are applicable to the proposed program. Note that 1 some potential impacts are applicable to all programs.
- 2. For each applicable potential impact (and corresponding receptor), describe control strategies that will reduce the risk of the potential impact to an acceptable level, and achieve the corresponding environmental outcomes.
- Conduct an impact assessment to determine if the control strategies address the potential impact (i.e., reduce the risk to an acceptable level). Indicate 3. where there is uncertainty pertaining to the likely effectiveness of the control strategies. Where the risk is not considered low, provide justification that the risk is acceptable, or consider additional strategies to reduce the risk to an acceptable level.
- 4. For each applicable potential impact, the corresponding outcome and outcome measurement criteria are required.
- Based on the description of the environment and proposed exploration activities, determine if any other potential impacts are applicable. For each new 5 potential impact, describe proposed control and rehabilitation strategies, conduct an impact assessment, and develop corresponding outcomes and outcome measurement criteria.

Impact assessment								
<b>Receptor</b> Lists are not exhaustive.	Potential impacts Lists are not exhaustive.	Is the potential impact applicable (Yes/No)? Some potential impacts are applicable to all	Control strategies Indicate where there is uncertainty pertaining to the likely effectiveness of the control strategies. Where the risk is not considered low, provide justification that the risk is acceptable, or consider additional strategies to reduce the risk to an acceptable level. – refer to Minerals Regulatory Guidelines MG22 for more information.	Risk assessment LH = likelihood of consequence CQ = severity of consequence			Outcomes	Outcome
		programs.		LH	CQ	Risk		
<ul> <li>Stakeholders:</li> <li>freehold landowners</li> <li>perpetual lease holders</li> <li>pastoral lease holders</li> <li>Aboriginal land (Anangu Pitjantjatjara Yankunytjatjara and Maralinga Tjarutja lands)</li> <li>Department of Defence</li> <li>state government departments.</li> <li>local government (councils)</li> <li>federal government</li> <li>native title parties.</li> </ul>	<ul> <li>Interference to:</li> <li>existing or permissible land use (includes loss of income, noise, dust, light, and other emissions).</li> <li>buildings, structures, existing tracks, or other infrastructure.</li> <li>aesthetic values of an area.</li> <li>Noncompliance with legislative requirements.</li> </ul>	Yes (Applicable to all programs.)	Continued liaison with all stakeholders through the program, involvement of pastoral stakeholders in earthworks, Native title holders have completed heritage surveys and are satisfied that there is no risk to any sites, All government approvals and notifications are in place and approval for the program has been given. "Gate Fee" and other costs have been agreed on with the pastoral lease holder. Minimal infrastructure in the region. Pastoral holder will be notified immediately regarding any damage to any infrastructure, whether caused by exploration activities or other causes.	2	В	Low	Stakeholders are fully informed and satisfied with the proposed methods used to conduct exploration activities on their land, and all prescribed forms are served, and agreements obtained in accordance with the Mining Act.	Provide the inform exploration compl stakeholders are during the course Provide the inform of the annual exp were served, and the commenceme
Stakeholder: DEW	<ul> <li>Interference to:</li> <li>existing or permissible land use.</li> <li>buildings, structures, existing tracks, or other infrastructure.</li> <li>aesthetic values of an area.</li> </ul> Noncompliance with legislative requirements.	<yes no=""> (Applicable to programs located adjacent to or within parks and reserves.)</yes>	Not applicable				For activities located within or adjacent to regional reserves, national, conservation and marine parks only: • no unauthorised interference with park management activities.	<ul> <li>Provide confirmat</li> <li>Park access in days prior to oparks, or</li> <li>Program notifisubmitted to largerves, natification</li> </ul>

#### measurement criteria (inc. monitoring plan)

nation requested within the 'Complaints' section of the annual iance report demonstrating that all reasonable complaints from resolved to the satisfaction of both parties prior to and ongoing of exploration program, without the involvement of DEM.

nation requested within the 'Landowner details and liaison' section loration compliance report demonstrating that prescribed forms agreements obtained in accordance with the Mining Act prior to ent of exploration activities.

ion that:

notification forms were submitted to DEW and DEM at least 10 entry into regional reserves, national, conservation and marine

ications for PEPRs approved for an ongoing period of time, were DEW and the DEM at least 21 days prior to entry into regional onal, conservation and marine parks.

		Impac	t assessment						
<b>Receptor</b> Lists are not exhaustive.	Potential impacts Lists are not exhaustive.	Is the potential impact applicable (Yes/No)? Some potential impacts are applicable to all	<b>Control strategies</b> Indicate where there is uncertainty pertaining to the likely effectiveness of the control strategies. Where the risk is not considered low, provide justification that the risk is acceptable, or consider additional strategies to reduce the risk to an acceptable level. – refer to Minerals Regulatory Guidelines MG22 for more information.	Risk assessment LH = likelihood of consequence CQ = severity of consequence			Outcomes	Outcome	
Flora and fauna and their habitats; includes Commonwealth and state scheduled species.	Loss/modification of native vegetation and associated habitats through the clearance of vegetation.	Yes (Applicable to exploration programs located within or impacting on native vegetation.)	Minimising the disturbance to existing vegetation by restricting vegetation clearance to the minimum required for a safe working environment.	3	B	Risk Moderate	<ul> <li>No permanent loss/modification of native flora and fauna populations and their habitats through:</li> <li>clearance</li> <li>fire</li> <li>other</li> <li>unless prior approval under the relevant legislation is obtained.</li> </ul>	Maintain before, d (e.g., drillsites, new demonstrating tha • The area and PEPR. • No uncontrolle Representative ph report.	
All flora and fauna, especially listed species.	Loss/modification of the environment (biological, social, and economic) through the introduction of weeds and pathogens.	Yes (Applicable to all programs.)	Ensuring that all vehicles and equipment are free from seeds and mud, by ensuring that they are thoroughly cleaned prior to the program and regularly inspected during the program if vehicles have been used away from the project area. We have an obligation to the landholder to not introduce any weeds or pathogens that may affect stock feed species.	3	В	Moderate	No introduction of new species of weeds and plant pathogens, nor increase in abundance of existing weeds species.	<ul> <li>Provide a stateme annual exploration</li> <li>Vehicle logs w vehicles are cl properties<sup>†</sup> wit relevant lando</li> <li>Photographic rehabilitation of weeds and pla existing weeds</li> </ul>	
All fauna	Entrapment of fauna through open drillholes and excavations.	Yes (Applicable to exploration programs that involve drilling and/or require excavations.)	All drillholes to be capped, if not backfilled to surface, immediately after drilling has finished. Sumps and any other excavations to be ramped to allow any animals to egress the excavation. Drillhole and sumps to be fully backfilled as soon as practical and within three months of the completion of the drillhole.	3	В	Moderate	No fauna traps created as a result of exploration activities.	<ul> <li>Maintain before, d excavations demo</li> <li>All drillholes w upon completi</li> <li>No fauna and throughout the</li> <li>All rehabilitation approval (for F expiry of a pro- unless otherw</li> <li>Representative ph report.</li> <li>Provide the informer exploration compli</li> </ul>	
Aboriginal heritage sites	Disturbance to Aboriginal heritage.	Yes (Applicable to all programs.)	All proposed sites and access routes are inspected by representatives of the Native Title Holders (Arabana), ground- disturbing activities to be located away from any identified sites. Any other sites with any indications of heritage value (for example any stone-chips, other artefacts) will be avoided until investigated by the Native Title Holders. The discovery of any human remains will be treated as a Police matter until outcomes of investigations. Standard procedure is to immediately stop all activities and alert police through the 000 number. Heritage Clearance Surveys have already been conducted over the proposed drill sites and access routes. Clearance zones have been defined and a number of exclusion zones have also been defined	3	D	Extreme	No disturbance to Aboriginal artefacts or sites of significance unless prior approval under the relevant legislation is obtained.	<ul> <li>Maintain a databas</li> <li>programs' section</li> <li>Heritage sites unless prior ap</li> <li>Work ceased authorisation.</li> <li>Aboriginal heri appropriately r</li> </ul>	

## measurement criteria (inc. monitoring plan)

during and after photographic evidence of all exploration sites ew track exit/entry points off existing tracks, costeans, campsites) at:

I method of disturbance is consistent with that described in the

ed fires\* occurred as a result of exploration activities.

hotos to be included within the annual exploration compliance

ent within the 'Compliance with approved programs' section of the n compliance report, confirming that:

were kept during the exploration program, demonstrating that all clean and free of plant and mud material prior to entering ithin the tenement areas, unless otherwise agreed to with the owners.

evidence before and during exploration operations and after of disturbed sites was captured, demonstrating that no new lant pathogens were introduced, nor an increase in abundance of ds recorded.

during and after photographic evidence of all drillholes and/or onstrating that:

were permanently or temporarily capped/plugged immediately tion.

I livestock became trapped in drillholes and/or excavations e duration of the program.

ion was completed within 3 months of expiry of the PEPR PEPRs approved for a period of 12 months), or 3 months after the ogram notification (for PEPRs approved for an ongoing period), vise authorised.

hotos are to be included within the annual exploration compliance

nation requested within the 'Rehabilitation' section of the annual liance report.

ase and provide a statement within the 'Compliance with approved n of the annual exploration compliance report demonstrating that: s were not impacted during the conduct of the exploration program approval was obtained under the appropriate legislation. on discovery of a significant site and recommenced only after

ritage sites identified during the exploration program were recorded and reported to authorities, if not previously known.

		Impac	t asses	ssment						
<b>Receptor</b> Lists are not exhaustive.	Potential impacts Lists are not exhaustive.	Is the potential impact applicable (Yes/No)? Some potential impacts	Control strategies Indicate where there is uncertainty pertaining to the likely effectiveness of the control strategies. Where the risk is not considered low, provide justification that the risk is acceptable, or consider additional strategies to reduce the risk to an acceptable level. –			k asse ikeliho equeno sever	ssment bod of ce ity of	Outcomes	Outcome	
		programs.			LH		Risk	-		
European heritage sites and sites of scientific and environmental significance	Disturbance to European heritage sites and sites of scientific and environmental significance (e.g., geological monuments, fossil reserves).	No (Applicable to exploration programs located close to or within European heritage sites and sites of scientific and environmental significance.)	No Eur Enviror The ori margin heritag	ropean Heritage sites or sites of Scientific and onmental significance are known within the project area riginal route of "The Ghan" railway line crosses the SW n of EL6195, however this is not listed as any form of ge site.	2 A. /	В	Low	No disturbance to European heritage sites and to sites of scientific and environmental significance unless prior approval under the relevant legislation is obtained.	<ul> <li>Demonstrate no im significance by:</li> <li>Maintaining evilocation of explate after the condu</li> <li>Providing a staconfirming sites program.</li> </ul>	
Soil/vegetation/fauna	Soil/vegetation contamination (e.g., hydrocarbons, rubbish, drill samples/cuttings, ablutions, other sources).	Yes (Applicable to all programs.)	<ol> <li>1)</li> <li>2)</li> <li>3)</li> <li>4)</li> <li>5)</li> <li>6)</li> <li>7)</li> <li>8)</li> </ol>	<ul> <li>Fuels and oils to be stored on bunded pallets or in bunded area lined with impermeable plastic. Spills in bunded areas can be controlled using spill kits to absorb spilled liquids. Care will be taken during refuelling of all vehicles to avoid spills, over-fills, drig and dribbles.</li> <li>Hydrocarbon (fuel, oil) spills to be remediated immediately with spill kits and by removal of contaminated soil to an appropriate disposal /treatment site, unless the spill is of a trivial amount. Contaminated soil to be dug and bagged in plastic for appropriate disposal at EPA-approved facility.</li> <li>Oil leaks from vehicles (particularly the drill rig) are the repaired as soon as practical. Impermeable/oil absorbent sheeting to be placed beneath the drill rig to catch any leaking oil. Leaking hydraulic hoses an fittings are to be replaced as soon as possible. All heavy vehicles to have hydrocarbon spill kits on board.</li> <li>Drill rig will have a non-permeable sheet laid out beneath it to catch any oil leaks. This will be disposed of in an appropriate manner at the completion of each drillhole.</li> <li>All rubbish to be disposed of in the closest rubbish dump, William Creek. Rubbish bins on site to be vermin proof to prevent dingos and other animals attempting to scavenge food scraps and spread rubbish and waste.</li> <li>Graywater disposal through soakage and evaporation pits, use of fully biodegradable, phosphate-free detergents.</li> <li>Blackwater will be retained in a Porta-loo or in cartridge-type toilet until it can be emptied in a suitable place (William Creek Caravan Park). Portaloo will be exchanged at an appropriate time and emptied by the hire company in compliance with EP and SA Health standards.</li> <li>Spill kits to be kept with the drill rig, available for any oil or fuel leaks from any vehicles associated with the project. (Photo 4)</li> </ul>	a n os or o d h h h	C	high	No contamination of soil and vegetation as a result of exploration activities.	<ul> <li>Demonstrate that a hydrocarbons) is di 1993 within 3 mont a period of 12 mon PEPRs approved fi in accordance with</li> <li>The name, loca facility.</li> <li>A statement wi annual explora was removed f disposal facility</li> <li>Photographic e demonstrating accordance with</li> <li>Maintain photographic e are:</li> <li>removed from a Radiation prote exploration, av</li> <li>backfilled dowr approval (for P expiry of a progunless otherwis)</li> <li>Provide the informate exploration compliated and a statement with a statement with a statement and a statement a rest and a statement a statement a statement a statement and a statement and a statement a sta</li></ul>	

## e measurement criteria (inc. monitoring plan)

mpact to heritage sites and sites of scientific and environmental

vidence, including detailed maps showing sites compared to the ploration activities, and photographic evidence of sites before and fuct of the exploration program.

atement within the annual exploration compliance report es were not impacted during the conduct of the exploration

all domestic or industrial waste (includes general rubbish and disposed of in accordance with the *Environment Protection Act* nths of the expiry of the PEPR approval (for PEPRs approved for nths), or 3 months after the expiry of a program notification (for for an ongoing period), and that all fuel and chemicals are stored h EPA requirements, by providing:

cation, and contact details of the authorised waste disposal

vithin the 'Compliance with approved programs' section of the ation compliance report confirming domestic and industrial waste from all exploration sites and disposed of at an authorised waste ty.

evidence within the annual exploration compliance report g that all fuel and chemical storage facilities were managed in *i*th EPA requirements.

aphs of all exploration sites and provide representative photos exploration compliance report demonstrating that drill cuttings

site and disposed of at a licensed facility

a minimum of 30 cm of soil, or in accordance with EPA guideline, *tection guidelines on mining in South Australia: mineral* vailable on the EPA website, or

In the drillhole, within 3 months of the expiry of the PEPR PEPRs approved for a period of 12 months), or 3 months after the ogram notification (for PEPRs approved for an ongoing period), rise authorised.

nation requested within the 'Rehabilitation' section of the annual iance report.

		Impac	t assessment						
<b>Receptor</b> Lists are not exhaustive.	Potential impacts Lists are not exhaustive.	Is the potential impact applicable (Yes/No)? Some potential impacts are applicable to all	Control strategies           Indicable         Indicate where there is uncertainty pertaining to the likely effectiveness of the control strategies. Where the risk is not considered low, provide justification that the risk is acceptable, or consider additional strategies to reduce the risk to an acceptable level. – refer to Minerals Regulatory Guidelines MG22 for more information.			ssment bod of ce ty of ce	Outcomes	Outcome	
		programs.		LH	CQ	Risk			
			9) Small amounts (representative samples to about 1kg from each metre) of drill chips/sludge produced during the rotary mud stage of each hole will be placed on the ground adjacent to the sumps. These will be pushed into the sump at the end of the drilling program. (Photo 5)						
Soil	Disturbance to the soil profile and topography, and accelerated soil erosion caused by exploration activities (e.g., construction of sumps, new tracks, and drill pads; ground compaction at laydown areas and camps).	Yes (Applicable to all programs.)	<ol> <li>Drillsite- will be cleared and levelled to the minimum required for a safe working area, approximately 50x50m. Will be positioned in such a way as to avoid having to clear vegetation, if possible, or the minimum amount of vegetation required to remove trip hazards.</li> <li>Sumps-constructed by removing the topsoil and stockpiling separately from the rest of the excavated material (Photo 2). 3 sumps, 3x4x1.5m each, ramped to allow escape of any fauna that falls in.(Photo 3)</li> <li>Campsite-positioned adjacent to the drillsite to reduce the number of daily vehicle movements and also to allow minimal clearing of vegetation and minimal disturbance to the ground surface.</li> <li>Access tracks-routed to avoid crossing sand dunes, claypans and salt lake/salina margins and also to avoid areas of moderate to dense vegetation. Access tracks will be formed by rolling vegetation with the front-end loader (with the bucket elevated used for sump and drillsite preparation and will follow any contours across slopes to reduce the chance of washouts if there is a major rain event. The routes will be flagged in advance to avoid sensitive sites and any heritage exclusion zones</li> <li>Traversed areas may be back-bladed by the tyned bucket of the front-end loader to break up any compacted soil. If there is minimal compaction, this will not be attempted, as it is more likely to damage any remaining vegetation roots in the soil</li> </ol>	4	B	Moderate	<ul> <li>Where soil disturbance occurs as a result of exploration activities, ensure that:</li> <li>topsoil quality and quantity are maintained</li> <li>the soil profile and topography are reinstated to original conditions</li> <li>there is no accelerated soil erosion.</li> </ul>	Maintain before, di drillsites, camps, la • The soil profile consistent with approval (for F expiry of a pro- unless otherwi • Where require- separately fror the expiry of th months), or 3 r approved for a • There are no s disturbed sites Representative ph report. Provide the inform exploration compli	
Surface water	Alteration to surface water – interference to surface drainage.	No (Applicable to exploration programs that are likely to impact on surface drainage channels.)	Significant water courses are being avoided during these planned activities, as they feature significantly in Arabana Mythology and are, by agreement with the Arabana people, exclusion areas. Crossing points of several minor water courses have been defined during the Heritage survey.	2	В	Low	No permanent modification to hydrological features caused by exploration activities without obtaining a water affecting permit from the relevant Landscape Board (under Landscapes Act SA 2019).	Provide before, du exploration complia (watercourses and within 3 months of period of 12 month PEPRs approved f Alternatively, provi compliance report.	

e measurement	criteria	(inc.	monitoring	plan)	)

during and after photographic evidence of all excavations, laydown areas and new tracks demonstrating that:

le and topography are reinstated to original conditions and is th natural surroundings within 3 months of the expiry of the PEPR PEPRs approved for a period of 12 months), or 3 months after the ogram notification (for PEPRs approved for an ongoing period), vise authorised.

ed, sufficient topsoil is removed (depending on soil profile), stored om subsoil and reinstated (in the correct order) within 3 months of the PEPR approval (for PEPRs approved for a period of 12 months after the expiry of a program notification (for PEPRs an ongoing period), unless otherwise authorised.

signs of accelerated soil erosion during and post rehabilitation of s.

hotos to be included within the annual exploration compliance

nation requested within the 'Rehabilitation' section of the annual liance report.

uring and after photographic evidence within the annual liance report demonstrating that original drainage contours d lakes) are consistent with the natural relief post rehabilitation of the expiry of the PEPR approval (for PEPRs approved for a ths), or 3 months after the expiry of a program notification (for for an ongoing period).

vide copies of water affecting permits within the annual exploration t.

		Impac	t assessment						
<b>Receptor</b> Lists are not exhaustive.	Potential impacts Lists are not exhaustive.	Is the potential impact applicable (Yes/No)? Some potential impacts are applicable to all	potential       Control strategies         ct applicable       Indicate where there is uncertainty pertaining to the likely effectiveness of the control strategies. Where the risk is not considered low, provide justification that the risk is acceptable, or consider additional strategies to reduce the risk to an acceptable level. – refer to Minerals Regulatory Guidelines MG22 for more information.		Risk assessment LH = likelihood of consequence CQ = severity of consequence		Outcomes	Outcome	
		programs.		LH	cq	Risk			
Groundwater/aquifer	<ul> <li>Groundwater contamination:</li> <li>contamination of aquifers through entry of pollutants from the surface</li> <li>interconnection between aquifers</li> <li>degradation of natural hydrostatic conditions (maintain pre-drilling pressures).</li> </ul>	Yes (Applicable to all exploration programs that may intersect groundwater.)	<ol> <li>Drilling operations through aquifers will be directly supervised by and under the control of a Class 3 water well driller.</li> <li>The drillholes will be fully cased from surface to basement.</li> <li>The drill collar will be constructed with the ability to quickly fit a control valve in place should a pressurised aquifer be intersected.</li> <li>Drill fluids used will be non-toxic, essentially salt and bentonite clays, thus there will be no contamination of aquifers, as the bentonite will seal the sides of the drillhole to prevent flow of drilling water into the aquifer.</li> <li>When drilling operations and any down-hole surveys have been completed, the drillhole will be cemented from 15m below the top of crystalline basement to the collar of the hole. This will effectively isolate all intersected aquifers and thus maintain hydrostatic pressure within each aquifer to pre-drilling levels, i.e., no flow of water from one aquifer to another.</li> </ol>	3	С	High	Drillholes restored to controlling geological conditions that existed before the hole was drilled or, where it is intended to re- enter the hole, the hole must be completed with casing of adequate strength and the casing cemented so that all aquifers are isolated to prevent the movement of any fluids behind the casing.	Maintain evidence with Earth Resour general specificati from DEW (Groun PEPRs approved i program notificatio authorised. Provide the inform exploration compli	
Soil/vegetation/fauna	Discharge of groundwater into the surrounding environment.	Yes (Applicable to all exploration programs that may intersect groundwater or where activities require the discharge of groundwater into the surrounding environment.)	<ol> <li>The drill collar will be constructed with the ability to quickly fit a control valve in place should a pressurised aquifer be intersected.</li> <li>Should a pressurised aquifer be intersected and uncontrolled water is discharged, the drill sumps will have enough reserve capacity to retain excess water until the control valve can be fitted and the water flow shut off.</li> </ol>	3	В	Moderatte	No discharge of groundwater outside of the exploration site (e.g., drillsite) into the surrounding environment and no discharge of water into a watercourse, unless prior approval under the relevant legislation is obtained.	Maintain photogra not discharged into permits were obta and/or lakes. Representative ph included within the	
Groundwater users	Interference to existing water users when extracting water from existing dams, water bores or mineral drillholes.	Yes (Applicable to all exploration programs that may require the use of water from existing dams, water bores or mineral drillholes.)	Use of water from Turkey-nest dams is with the approval of the pastoral landholder. The landholder is also being compensated for water taken from the Turkey-nest dams. Recent (January, March, April, September 2022) heavy rain has recharged all turkey-nest dams in the region to capacity.	2	В	Low	No public nuisance impacts resulting from the extraction of water for exploration purposes, unless prior approval under the relevant legislation is obtained.	Provide the inform exploration compli stakeholders were during the course Where permits are copies of the licen	
Soil/vegetation/fauna	Degradation of rehabilitated access tracks caused by third party access (includes previously closed and rehabilitated access tracks).	Yes (Applicable to exploration programs that create new access tracks.)	Due to the remoteness of the area that this program is in, it is highly unlikely that third parties will attempt to access any rehabilitated access tracks. The station tracks are all "no public access", with the exception of the Halligan Bay Track. Take-off points from existing access tracks will be rehabbed after the program to make their departure points not easily visible, and the new access tracks will be S-curved at the start to reduce straight line of sight tracks. Wheel tracks will be back-bladed to decompact any compacted soil and to fill in obvious wheel-ruts.	2	В	Low	Rehabilitated access tracks remain permanently closed, unless prior approval under the relevant legislation is obtained.	Maintain before ar closed and rehabil PEPRs approved to program notification authorised. Representative phoreport. Provide the inform exploration compli	

## e measurement criteria (inc. monitoring plan)

e demonstrating that drillholes are decommissioned in accordance rces Information Sheet M21, *Mineral exploration drillholes* – *tions for construction and backfilling*, and/or specific conditions ndwater) within 3 months of the expiry of the PEPR approval (for for a period of 12 months), or 3 months after the expiry of a ion (for PEPRs approved for an ongoing period), unless otherwise

nation requested within the 'Groundwater' section of the annual iance report.

aphic evidence of all drillsites demonstrating that groundwater was to the surrounding environment, unless water affecting activity ained allowing the discharge of groundwater into watercourses

hotos and water affecting activity permits (where applicable) to be e annual exploration compliance report.

nation requested within the 'Complaints' section of the annual liance report demonstrating that all reasonable complaints from e resolved to the satisfaction of both parties, prior to and ongoing of the exploration program without the involvement of DEM.

e required for the extraction and/or usage of groundwater, provide nee or permit within the annual exploration compliance report.

and after photographic evidence demonstrating that all tracks are illitated within 3 months of the expiry of the PEPR approval (for for a period of 12 months), or 3 months after the expiry of a ion (for PEPRs approved for an ongoing period), unless otherwise

notos are to be included within the annual exploration compliance

nation requested within the 'Rehabilitation' section of the annual liance report.

Impact assessment								
<b>Receptor</b> Lists are not exhaustive.	Potential impacts Lists are not exhaustive.	Is the potential impact applicable (Yes/No)? Some potential impacts are applicable to all	<b>Control strategies</b> Indicate where there is uncertainty pertaining to the likely effectiveness of the control strategies. Where the risk is not considered low, provide justification that the risk is acceptable, or consider additional strategies to reduce the risk to an acceptable level. – refer to Minerals Regulatory Guidelines MG22 for more information.			ssment bod of se ty of se	Outcomes	Outcome
		programs.		LH	CQ	Risk		
			It should be noted too, that during the recent (November 2022) Heritage Clearance Survey, access to proposed sites was relatively short, with nearly all sites being within 1.5km of existing station tracks, with only one exception.					
Community/landowners	Damage to infrastructure and loss of income through fire.	Yes (Applicable to all programs.)	Due to the general lack of vegetation in the region, it is considered highly unlikely that an uncontrolled fire could propagate. During the drilling program there may be campfires used, however consideration will be given to the prevailing weather at the time (e.g. high winds, dry conditions). If campfires are used, controls will include the presence of fire extinguishers, the hard and fast rule of not leaving unattended fires burning and ensuring that the water truck's tanks are full. Any operations that result in sparks, such as welding or grinding metals, will be supervised and closely monitored for their potential for fires, with ignitable material moved well away from the heat source. All vehicles are equipped with fire extinguishers, and the water tank on the support truck is equipped with a high- pressure pump. The water tanks will be re-filled as soon as possible after they have been emptied (after filling sumps etc) so that it can be used for fire suppression if needed.	1	В	low	No loss of infrastructure or income through fire as a result of exploration activities.	Provide a stateme annual exploratior occurred. Alternatively, prov fires* demonstratin through the impler
General public	Injury or death to members of the public as a result of exploration activities.	Yes (Applicable to all programs.)	Due to the remote location of the drill sites, it is highly unlikely that members of the general public would be affected by the drilling program. With the camp set next to the drill site, any member of the public seen approaching the worksite would be stopped and prevented from entering the worksite. The access to the drillsite will have appropriate warning signs declaring No entry to the worksite. The drillsite will also have appropriate warning and safety signs. (Photo 1) The highest risk activity to the general public is from long- distance driving. Strategies will be put in place to minimise fatigue risks during long-distance driving, such as regular breaks/stops, and maintenance of vehicles to ensure that they are safe and comply with relevant regulations and rules. As already mentioned (and I mention it again to emphasise the fact) all crew will camp near the drill site to avoid having to drive on public roads after a 12-hour shift. Both the drilling contractor and CUS have OH&S policies regarding driving and safety. The drilling company and CUS both carry \$20million Public Liability Insurance.	3	E	Extreme	No accidents involving the public that could have been reasonably prevented by the licensee.	Provide a stateme annual exploration the public during a If an accident invo investigation repor that the licensee c implementation of
General public, employees, contractors and the environment	Contamination of the environment when exploring for known uranium and thorium deposits.	No (Applicable to exploration programs located within known	Exploration is for Copper-Gold, the program is not in a known Uranium or Thorium deposit. All core and samples are scanned with a Scintrex spectral scintillometer as standard	2	В	Low	No increase in background radiation levels, and employee/contractor exposure levels during the	Maintain a databas programs' section • Radiation leve existing backg

## measurement criteria (inc. monitoring plan)

ent within the 'Compliance with approved programs' section of the n compliance report confirming that no uncontrolled fires\*

vide a report on the independent investigation of all uncontrolled ing that the licensee could not have reasonably prevented the fire ementation of precautionary measures.

ent within the 'Compliance with approved programs' section of the n compliance report confirming no accidents occurred involving and after the exploration program.

olving the public did occur, provide a copy of the independent ort within the annual exploration compliance report demonstrating could not have reasonably prevented the accident through the f precautionary measures.

ase and provide a statement within the 'Compliance with approved n of the annual exploration compliance report demonstrating that: els post exploration and rehabilitation are consistent with preground levels.

Impact assessment									
<b>Receptor</b> Lists are not exhaustive.	Potential impacts Lists are not exhaustive.	Is the potential impact applicable (Yes/No)? Some potential impacts are applicable to all	<b>Control strategies</b> Indicate where there is uncertainty pertaining to the likely effectiveness of the control strategies. Where the risk is not considered low, provide justification that the risk is acceptable, or consider additional strategies to reduce the risk to an acceptable level. – refer to Minerals Regulatory Guidelines MG22 for more information.	Risk assessment LH = likelihood of consequence CQ = severity of consequence			Outcomes	Outcome	
		programs.		LH	CQ	Risk			
	Public and employee/contractor exposure to low level radiation.	uranium or thorium deposits.)	procedure. It is highly unlikely that radioactivity levels from core and drill samples would be high enough to cause concern. CUS has a Radiation Management Plan, which will be put into place should significant levels of radioactive elements be detected in the core or chip samples.				exploration program are within safe limits.	•	Employee and exploration pro
Other (if applicable)									

\* Uncontrolled fires = fires that escape outside of the work area (e.g., drillsite).

† Properties = freehold (cropping and grazing land); perpetual/pastoral lease land; council land; regional reserves; national, conservation and marine parks; Aboriginal land; Commonwealth land etc.

## e measurement criteria (inc. monitoring plan)

d contractors' exposure levels were within safe limits during the rogram.

#### SECTION G - OPERATOR CAPABILITY

Provide information demonstrating that the tenement holder and operator (where applicable) has the capability to conduct the program in a manner that consistently ensures ongoing achievement of the environmental outcomes. This may be demonstrated within the PEPR by providing an overview of the following:

- Manuals or standard operating procedures that outline the safe and environmentally sound operation of all critical
  operations associated with the exploration program that ensure compliance with the PEPR.
- Systems in place to monitor, audit and assess compliance against the criteria approved in the PEPR.
- Systems in place to identify and report any noncompliance with regulatory requirements or relevant environmental outcomes (e.g., measures in place to report incidents in accordance with regulation 79(3)).
- Practices and procedures in place to provide appropriate communication of regulatory requirements to employees and contractors (e.g., induction programs).
- Practices and procedures in place to respond to, and communicate with landowners and external parties on the proposed program and compliance matters (e.g., complaints)

Copper Search Limited has comprehensive Occupational Health, Safety and Environment policies to protect worker's health and safety, and to protect the environment that they are working in, and to protect them from the environment that they are working in.

Copies of the final (approved) version of this PEPR will be supplied to all field operatives and become part of the field induction.

#### SECTION H – ADDITIONAL INFORMATION

List any other supporting information and/or documents submitted with the application, including land access approvals/permits required to conduct the proposed exploration program.

<Include text here.>

#### SECTION I – PHOTOS

Include photographs in this section:

- that have been obtained during site visits
- that help describe relevant environmental and operational aspects in the PEPR.

To insert photos, copy and paste the photo into the template below. Resize photos to fit page width. Ensure that all information about each photo is completed and refer to the photo number in the relevant section of the PEPR.

NOTE: Most of the following photos are of a recently completed drilling program and are typical of the drill site set-up and access.



Site identification	Date taken	Photo number & PEPR section reference	Easting (GDA94)	Northing (GDA94)	Zone	Details and Comments
BKDDH02	24/04/2022	Photo 2, Section D, Drill site preparation	624720	6714920	53	Stockpiled soil (left) separated from the rest of the material excavated from sumps. Note too, Porta-loo!
-						
and the second division of the second divisio						
-						
					and a	
	and the					
		and the state of the	the state	Server and the server of the	Sector 1	









Site identification	Date taken	Photo number & PEPR section reference	Easting (GDA94)	Northing (GDA94)	Zone	Details and Comments
ACDDH01	08/02/2022	Photo 7, Section C, Landform and topography	625400	6822000	53	General view, typical Simpson/Strzelecki Dune fields in this region, illustrating the general lack of vegetation except for low bushes and ground cover. This photo was taken after exceptionally heavy regional rain, and is not typical of the vegetation
and the second			Andreas and a second se			
					-	
*						
	a file					

Site identification	Date taken	Photo number & PEPR section reference	Easting (GDA94)	Northing (GDA94)	Zone	Details and Comments
Spring Hill 02	18/11/2022	Photo 8, Section C Landform and topography	614170	6835290	53	General view, typical Stony Plains of the region, illustrating the general lack of vegetation except for low bushes and ground cover.
	ob					
			-			
24.12	1000					

## SECTION J – MAPS

Provide a map(s) showing the following information that is located adjacent to or within the proposed area of operations, where applicable:

- tenement boundaries,
- cadastral information,
- existing surface contours,
- existing vegetation,
- location of the proposed exploration operations (includes drillholes, existing and new access tracks, drill traverses, campsites, laydown areas and other applicable information) and/or the target exploration area(s),
- location of existing ephemeral and permanent rivers, creeks, swamps, streams or watercourses and water management structures,
- location of towns, houses and homesteads, existing roads, rails, fences, transmission lines, buildings, dams and pipelines
- known sightings of listed species,
- location and extent of all environmentally sensitive areas,
- any relevant land use types (e.g., parks and reserves, Aboriginal freehold land, Woomera Prohibited Area).

All maps and sections must conform to the standards outlined in the Exploration PEPR Terms of Reference.





Ongoing exploration PEPR template - January 2021

## Groundwater Dependent Ecosystems Atlas CUS Southern Peake Project area



Date: 20 December, 2022

## SECTION K – PUBLIC RELEASE

PEPR documents will be registered on the mining register and publicly released in full without the need to request consent from the tenement holder(s). Ultimately, it is the applicant's responsibility to ensure that confidential, or commercially sensitive, information is not included within the PEPR application.

#### SECTION L – SUBMISSION OF THE APPLICATION

An application for an Exploration PEPR or PEPR review, must be submitted in the following form, unless otherwise specified by the Director of Mines or an authorised officer:

- an electronic version of the PEPR must be submitted using the exploration PEPR template(s) provided on the DEM Minerals website,
- the electronic version must be submitted online through the DEM Minerals website using the exploration PEPR submission form,
- the electronic version must be submitted in one single Acrobat PDF file, and
- Microsoft Word-compatible files must be submitted if requested by the Director of Mines (or delegate), or other authorised officers.